

# **Health and health-related behavior profiles of Finnish men in their thirties during 1958, 1981, and 2010-2012**

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Thesis

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<p>Tällä hetkellä Suomen merkittävimmät tautien riskitekijät ovat korkea verenpaine, runsas alkoholin ja tupakan käyttö, lihavuus ja matala koulutustaso. Vaikka kolmekymppisten suomalaisten miesten terveys- ja terveyskäyttäytymisprofiilit ovat hyvin tunnettuja 1970-luvulta lähtien, 1950–60-luvuilta saatu tieto on edelleen niukkaa. Tämän tutkimuksen tarkoituksena oli luonnehtia kolmekymppisten suomalaisten miesten terveysprofiilien muutoksia ja pysyvyyttä vuosina 1958, 1981 ja 2010-2012 sekä tutkia näiden profiilien eroja koulutustasoin.</p> <p>Tutkimuksemme data perustuu kolmeen laajaan suomalaiseen terveysprofiilikyselyyn: Juomiskäyttäytymisen periytyminen (1958), Vanhemman suomalaisen kaksoskohortin toinen aalto (1981), FinnTwin16-kohortin viides aalto (2010–2012). Kyselyistä 1804, 4284 ja 1890 osallistujaa täyttivät tutkimuksemme kriteerit (kolmekymppinen suomalainen mies). Laskimme yleisten tutkimuspopulaatioiden riskitekijöiden ja sairauksien esiintyvyyssasteet. Lisäksi laskimme ristitulosuhteet (OR) 95%:n luottamusväleillä (CI) koulutustasotasovertailua varten. Lopuksi teimme herkkyysanalyysijä, jotta koulutustason vertailu olisi edustavampaa.</p> <p>Tupakoinnin yleisyys väheni merkittävästi tutkimusjakson aikana, kun taas alkoholinkäyttö, lihavuus ja koulutustaso lisääntyivät huomattavasti. Kaikissa kyselyissä korkeasti koulutettujen keskuudessa tupakoitiin vähemmän, humalahakuista juomista harrastettiin vähemmän sekä ylipaino ja lihavuus olivat harvinaisempia (lukuun ottamatta ylipainoa ja lihavuutta vuoden 1958 kyselyssä). Kansanterveyttä parantavia toimenpiteitä tarvitaan lisää koko väestölle, ja terveyden edistäminen tulisi enemmän kohdistaa alemman koulutustason omaaville. (172 sanaa)</p>			
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<p>Currently, Finland’s most salient risk factors for disease are high blood pressure, high alcohol and tobacco use, obesity, and low educational level. While the health and health-related behavior profiles of Finnish men in their thirties are well known since the 1970s, knowledge from the 1950s –60s remains scarce. This study aimed to characterize change and stasis in the health profiles of Finnish men in their thirties during 1958, 1981 and 2010-2012, and to explore the differences in these profiles by educational levels.</p> <p>The data are based on three extensive Finnish health profile surveys: Inheritance of Drinking behavior (1958), the Older Finnish Twin Cohort wave 2 (1981), FinnTwin16 Cohort wave 5 (2010–2012). We ascertained 1,804, 4,284, and 1,890 participants who met our study criteria (a Finnish man in his thirties), respectively. We computed risk factor and disease prevalence rates for the general population analysis, and calculated odds ratios (OR) with 95% confidence intervals (CI) for the educational level comparison. In addition, we performed sensitivity analyses to make the educational level comparison more representative.</p> <p>Smoking prevalence decreased significantly during the study period, whereas alcohol use, obesity, and educational level increased considerably. Highly educated participants were less likely to smoke cigarettes, less likely to engage in heavy episodic drinking, and less likely to be overweight and obese at all time points (except overweight and obesity in 1958). Further health intervention measures are needed for the general population, and health promotion should be targeted at those with lower educational levels. (247 words)</p>			
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# 1 Introduction

The health and health-related behavior profiles of the Finnish population are essentially a representation of the population's general well-being. These profiles depend on metabolic risk factors, environmental risk factors as well as behavioral risks. Currently, Finland's leading death and disability driving risk factors (measured by contribution to total number of disability-adjusted life years) are high blood pressure, tobacco, high body-mass index (BMI), and alcohol use (1). The knowledge and monitoring of the variables and risk factors affecting these health profiles are essential in the development of effective primary prevention inside and outside of the health-care system. Since the 1970s, Finland has sought to reduce the overall burden of disease, namely through legislative measures to limit tobacco and alcohol consumption, and community-based health promotion campaigns. Improving public health by developing the national health policy became a major priority in Finnish politics in the 1970s (2). Retrospective studies illustrate that these actions have been effective in reducing and stabilising exposure to risk factors, such as tobacco smoking in Finland (3). In addition to the risk factors mentioned above, one of the most salient observations considering one's health is that educational level plays a role in several key risk factors associated with various diseases. Therefore, the knowledge of the variations in health and health-related behavior profiles caused by inequalities in educational attainment is also a prerequisite for effective health promotion. (4–6) Along with improving public health, reducing health inequalities is one of the priorities in Finnish health politics (2). The consensus is that health promotion should be targeted primarily at those with lower levels of education.

The health and health-related behavior profiles of Finnish men in their thirties are well known since the initiation of the community-based North Karelia project, which aimed at reducing high cardiovascular mortality rates in North Karelia from 1972 onward. Since 1972, risk factor surveys have been carried out at five-year intervals, and other regions have also been included in the surveys later. (7) Currently, the FinHealth Study (initiated in 2017) is the most prominent recent health profile study in Finland, with the next assessment due in 2022 (4).

While knowledge of the health and health-profiles of all age groups among both men and women are essential, knowledge of men in their thirties is most limited for several reasons. Children are connected to health care through child health centers and schools. Women are often associated with health care through pregnancy and children. Furthermore, older people utilize health care services more actively than other people due to higher disease prevalence.

In contrast, men in their thirties are scarcely studied since they are healthier and therefore less likely to be connected to health care at this stage of life. It was only with more comprehensive occupational health care that data from men in their thirties could be collected systematically.

This study reports nationwide data on health and health-related behaviour profiles of Finnish men in their thirties over the past decades. The data are based on three twin studies conducted in 1958, 1981 and 2010–2012, with a special emphasis on the first data point, since it contains novel data. The purpose is to provide new data from 1958 to strengthen our knowledge about the stability and changes in these health profiles. Currently, the 1950s-60s is a relatively unknown era considering health profiles of Finnish men in their thirties, leaving us a large gap in knowledge. Furthermore, establishing a more representative retrospective description of the health and health-related behavior profiles of Finnish men in their thirties facilitates our understanding of the effectiveness of risk factor/disease intervention protocols such as the adoption of measures to reduce tobacco and alcohol consumption, and community-based health promotion campaigns.

## **2 Review of the literature**

### *2.1 Health and health-behavior related profiles of Finnish men*

Today, Finland is known for its excellent education system, but a high level of education was still relatively rare in the 1950-1960s. We were able to use census data, migration and mortality estimates, and the number of senior high school graduates to calculate the proportion of men in their thirties who had graduated senior high school and were living in Finland in 1960 (8, 9). We approximated that senior high school graduates represented about 4.8–6.9% of the male population in their thirties in 1960. Today, approximately 40% of boys graduate from senior high school (10). However, as education developed, unemployment increased threefold during 1959–2019 (8, 11). In addition, the proportion of families with children and the average number of children decreased quite significantly in 1959–2012 (12).

The harmful health effects of tobacco and alcohol are well recognized (13). Unfortunately, Finland has a long history of heavy smoking and heavy drinking. According to the Seven Countries Study (SCS), the prevalence of smoking among men aged 40-59 was 69% in eastern Finland and 59% in western Finland in 1959. (14) Another study reported that 58% of Finnish men smoked cigarettes in 1960. However, no information was reported on age or the sample size. (15) These high levels of smoking were decreased by strict legislative measures as well as anti-smoking campaigns, and by 2017, the prevalence of smoking had dropped to 18% among men aged 30–39. Among the SCS (1959) smokers, approximately 45% were heavy smokers (20+ CPD) in eastern Finland, whereas in western Finland, this figure was reported at 25% (14). A study on Finnish male public employees concluded that 30% of smokers were heavy smokers in 2005 (16). Contrary to smoking, alcohol consumption grew significantly. Total annual alcohol consumption increased from 3.8 litres to 11.1 litres of pure alcohol per capita between 1960 and 2016 (17). In 1968, a nationwide study on alcohol consumption concluded that 5% of Finnish men aged 30–49 consumed alcohol at least four times a week, about 14% twice a week, and slightly under 21% once a week (18). In 2016, about 7% of Finnish men consumed alcohol at least four times a week, about 28% twice a week, and approximately 21% once a week (17). These changes indicate a considerable increase in drinking frequency as well. The prevalence of heavy episodic drinking also increased (17). Moreover, there was a slight 1 percentage point increase in sobriety among men in their thirties between 1968 and 2017 (4, 18).

The average height, weight, and BMI have increased significantly during the past decades. The Finnish Mobile Clinic Health Examination survey (FMC) (conducted in 1966–1972) reported a mean BMI of 25.2 kg/m<sup>2</sup>, a mean body height of 173.7 cm and a mean body weight of 76.3 kg among men aged 30–39. (19) In 2017, men aged 30–39 had a mean BMI of 27.0 kg/m<sup>2</sup>, a mean height of 179.3 cm and a mean weight of 86.9 kg (4). The increase in BMI was also accompanied by elevated overweight and obesity rates. The SCS concluded that approximately 30% of western Finnish men were overweight and 5% obese, and 22% of eastern Finnish men were overweight and 3% obese in 1959. (14) Currently, 40% of Finnish men aged 30-39 are overweight and 22% obese, which is a significant increase (4).

Diabetes, high blood pressure, and asthma are salient chronic diseases which can easily lead to premature death if left untreated. In addition, these diseases cause a large economic burden. Finland has the highest incidence of type 1 diabetes in the world (20). According to the FMC,

approximately 0.26% of Finnish men aged 30–39 suffered from any known type of diabetes in 1966–1972 (21). By 2017, the prevalence of any known type of diabetes had risen to 2.2% in the same age-group (4). High blood pressure (systolic BP  $\geq$  140 mmHg and/or diastolic BP  $\geq$  90 mmHg) has been consistently declining during the past decades. More than 50% of North Karelian men in their forties had high blood pressure in 1959 (14). Moreover, a little under 35% of men in their forties had high blood pressure in 2017 (4). The prevalence of asthma among Finnish men increased significantly from 0.08% to 12.3% between 1961 and 2017 (4, 22).

## 2.2 *Differences in health and health behavior-related profiles by educational levels*

It is widely considered that the level of education has a major impact on a person's health profile. Higher educational level is globally associated with a healthier lifestyle and better awareness of health and its risk factors, as well as diseases. (4–6) Smoking was less common among highly educated men in Finland in 1972, and although smoking has decreased significantly during the past decades, differences between educational level groups have widened (4, 23, 24). Highly educated Finns were less likely to be heavy smokers (20+ CPD) in 1975 (25). However, currently there is no clear consensus on the relationship between educational level and smoking intensity. A 2014 Finnish study stated that smoking intensity and educational level are inversely related (26). Conversely, a 2012 U.K. review concluded that smoking intensity is higher among those with higher socioeconomic status in developed countries (27). High socioeconomic status was associated with a higher frequency of alcohol consumption in between 1968 and 2008 (18, 28). In addition, the men with high socioeconomic status had a greater annual consumption of alcohol but were less likely to engage in heavy episodic drinking in 1968-2008 (18, 28). Highly educated men were more likely to be physically active between 1972 and 2011 (29, 30).

Educational level has a strong positive relation with body height in Finland as well as globally (31). This observation was also found with twin pairs discordant for educational level and body height (adjusting for age) in 1975 and 1981 (32). Furthermore, high educational level was associated with a higher BMI in 1972 but this relationship reversed in the following years (23). Educational level was inversely associated with BMI in 2017 (4). Modest overweight (BMI >



27.0 kg/m<sup>2</sup>) was slightly more common among men with high socioeconomic status according to the FMC in 1966–1972. However, no significant difference was found in the prevalence of obesity (BMI > 30.0 kg/m<sup>2</sup>). (19) This could implicate a possible positive relationship between BMI and educational level of men also in the 1950s and the first half of the 1960s. Nevertheless, along with higher BMI, overweight and obesity were associated with a low educational level in 2017 (4).

No significant education-related differences were found in diabetes incidence among Finnish men in 1972 or 1977 (adjusting for age, BMI, physical activity, and dietary fat) (33). However, numerous studies conclude that diabetes prevalence is currently elevated among those with lower educational attainment in Finland and Europe (4, 34). Educational level was inversely associated with the risk of hypertension among Finnish men both in 1972 and 2017 (4, 23, 35). A case-control study of Finnish twin pairs reported that high educational level was associated with a decreased risk of developing asthma during 1977–1993 (36). Similarly, asthma was still more prevalent among the less educated in 2017 (4).

### 2.3 *The existing literature is scarce*

A considerable volume of literature has been published on the changes in health and health-related behavior profiles in Finland, and they provide valuable insight into the health effects of these variables and risk factors (1, 4, 7). However, based on the studies above, the literature on smoking, alcohol use, physical activity, body height and weight, and diseases remains very scarce or non-existent among Finnish men in their thirties in the 1950s or the first half of the 1960s. In addition, most studies in this field, such as the SCS (conducted in 1959), have only focused on men aged over 40 (14). Men in their thirties present relatively low disease incidence rates, therefore the samples must be very large. Hence, studies on men in their thirties were uncommon at the time. Furthermore, previous studies, e.g., the SCS, show strong regional constraints, and consequently fail to establish representative samples on a national scale.

### 3 Aims

The aims of this study were to report new nationwide health profile data from 1958 to help characterize stability and changes in health and health-related behavior profiles of Finnish men in their thirties, and to explore inequalities in these profiles by educational levels over a 54-year period. We place special importance on smoking prevalence, alcohol use, BMI, and educational level, since they have a great impact on the health profiles of Finnish men. The following questions were set as guidelines to fulfil these aims.

1. What did the health and health-related behavior profiles of Finnish males in their thirties look like in 1958?
2. How the health and health-related behavior profiles of Finnish males in their thirties have changed during 1958, 1981 and 2010–2012?
3. To what extent can variations in health and health-related behavior profiles be attributed to inequalities in educational levels?

### 4 Materials and Methods

#### 4.1 *Participants and description of data sets*

#### 4.2 *Inheritance of Drinking Behavior (IDB)*

Inheritance of drinking behavior, by Juha Partanen, Kettil Bruun and Touko Markkanen, was an extensive twin study conducted in 1956–1966. The study explored how drinking behavior and its various components were impacted by hereditary and environmental factors. The lack of prior literature and knowledge made this topic particularly fascinating. Several general guidelines helped to shape the scope of the study. These concerned the target population, items, and varying types of drinking and its components. It was essential that the target population was as broad as possible considering drinking behavior. Also, items both on drinking frequency, and its social consequences were to be included. The prior research on normal drinking was limited, therefore it was covered in this study. (9)

The twin study method allowed researchers to accurately separate the genetic and environmental factors of drinking behavior. Other alternatives for the research method were animal testing, pedigree studies, and observational research. Animal testing was not used, since the behavioral traits of alcohol use differ largely from humans. The pedigree study method

demanded too long a timespan, also the subpopulations for an observational study were too hard to assemble and the method's feasibility was uncertain. (9) However, the familiar nature of alcoholism was well known already at that time (37).

In order to reach a representative target population, twins from all over Finland were interviewed in 1958. In terms of the research areas of the study, it was considered appropriate to interview male twins only, since females most likely did not consume enough alcohol to be considered as heavy users of alcohol at the time. Also, many of them had changed last names. Therefore, obtaining a sufficient amount of female twin pairs was deemed to be too challenging. (9)

The second condition of the target population was that every twin had to be born between 1920 and 1929. This reasonably large age difference between twin pairs was considered to provide broad variation in drinking behaviors, which satisfied one of the general guidelines of the study. Based on previous knowledge, the probability of then-current drinking behavior continuing in the future was relatively high in this age group (28–38 years of age during the interviews). (9)

The twins whose co-twin had died, were paired with their non-twin brother to form a new subpopulation called B. The brothers were matched only if the co-twin had deceased before he turned seven and within-pair age difference did not exceed six years. It is common knowledge, that fraternal twins genetically resemble their co-twins as much as regular siblings each other. On the basis of this information, a sub-study was conducted between B-pairs and fraternal twin pairs. The sub-study investigated how age affected drinking behavior. The study consisted of three subpopulations: monozygotic (MZ) pairs, dizygotic (DZ) pairs and B-pairs. All twins in these subpopulations were born between 1920 and 1929. The ages of the normal brothers in the B population were somewhat dependent on the age of their brother. Within-pair age difference was allowed to be a maximum of six years, therefore normal brothers could have been born between 1914 and 1935. In addition, all pairs lived in Finland in 1958. (9)

To gather basic information about twins born in 1920–1929, letters were sent to a total of 608 local register authorities that had provided Statistics Finland with data on multiple births earlier. According to this data given to Statistics Finland, there were 11,910 multiple births in Finland between 1920 and 1929, however, no information was given about the number of twin

births or the sex distribution. Triplet and higher order births are rare compared to twins, and were then associated with great infant mortality. (9)

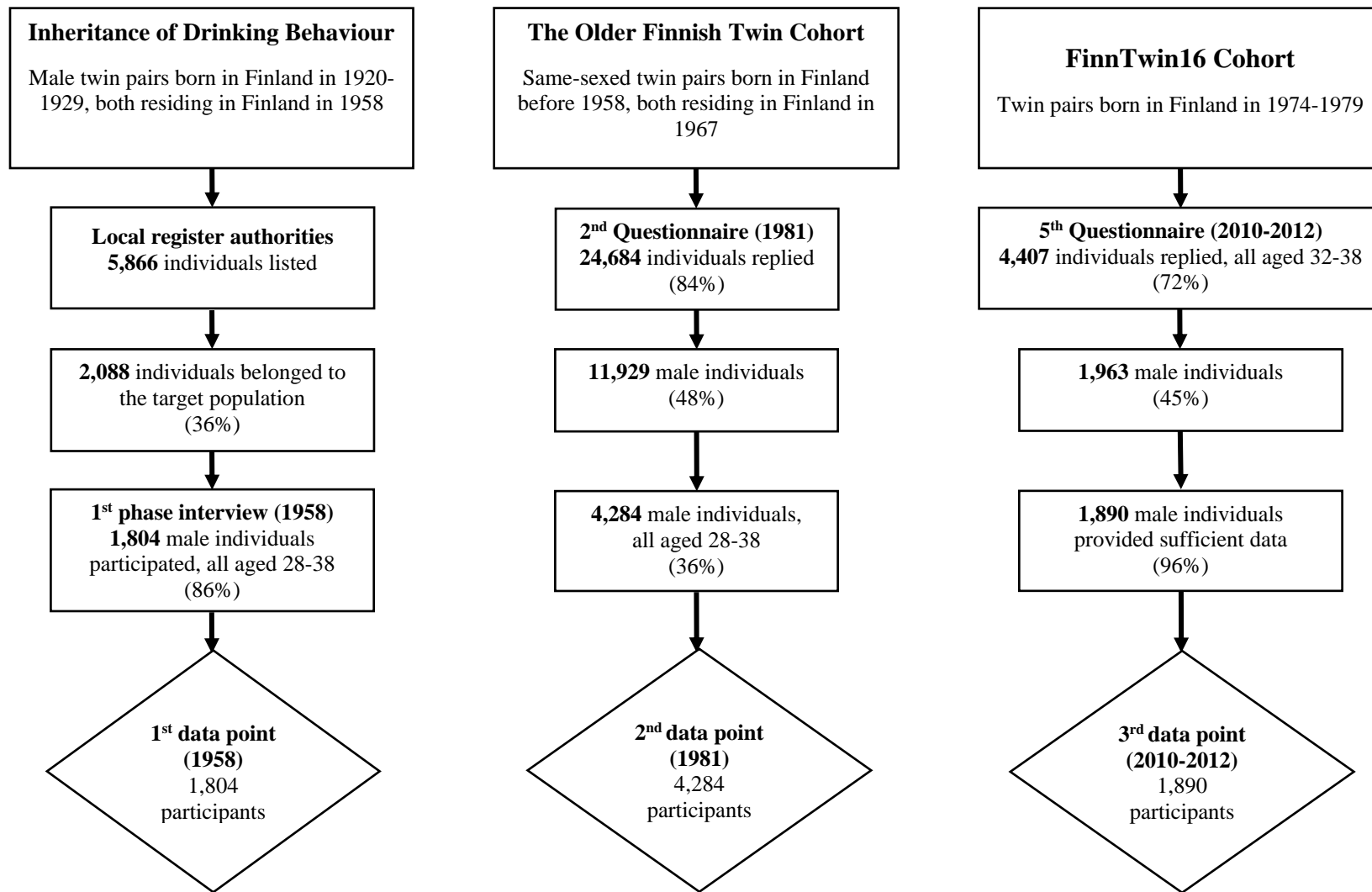
Data collection was divided into four different phases. In the first phase, conducted in 1958, an interview was held for each twin by 30 State Alcohol Monopoly (Alko) employees. The interview consisted mainly of multiple-choice questions, and it was to be conducted without the presence of a third party. The questions covered biographical data, relationship between co-twins, external circumstances, drinking behavior, illnesses, food and taste preferences and anthropological measures. Since traditional twin study is based on comparing monozygotic (MZ) and dizygotic (DZ) pairs to determine the heritability of a trait, the twins were classified thoroughly with serological analysis and anthropological measures. Blood samples were collected from approximately half of the twins in phases two and four, which were conducted in 1958 and 1960, respectively. Personality and intelligence tests were held in the third phase in 1959. The aim of the third phase was to investigate the effect of these test results on drinking behavior, as well as their heritability. (9)

As mentioned previously, the number of multiple births was 11,910 in 1920–29. However, no information was provided on the number of twin births or the sex distribution. The number of multiple births not considered as twin births was rather small, therefore this figure could be considered adequate to depict twin births only. To get a reliable estimate for the sex distribution, twin birth statistics from 1940–49 were used. These figures suggested that 31.3% of the twin pairs were male, which left 3,728 pairs for investigation. The next analysis was based on a study (*Empirical similarity diagnosis in twins*) conducted by Erik Essen-Möller in 1941. He claimed that the proportion of twins born alive and living at one year of age was 71%, and 82% have their co-twin alive. Statistics Finland provided data on males in the general population. Exactly 90% of the males were living at the age of one using those who were born alive as the baseline population. Since the study was based on male twins, the first figure (71%) can be estimated at 69% due to male mortality rates being higher compared to females. Using these estimates, the number of male twin pairs born alive in 1920-29 and living at one year of age was calculated to be 2,110 ( $\frac{0.69 \times 0.82 \times 7,456}{2}$ ). (9)

Using males born in 1920-29 and still alive at the age of one as a reference point, the proportion of males still living in Finland in 1960 was 79%. Since twins have higher child mortality rates, this figure was decreased by 2%. Furthermore, Essen-Möller claimed that 77% of twin pairs were still alive at 25. Using these numbers, the minimum number of twin pairs still alive in

Finland in 1958 was estimated at 1,251  $((0.77)^2 \times 2,110)$ . When the higher child mortality of twins, and pairs where one of the twins had deceased were not taken into account, a maximum of 1,563  $(\frac{0.79 \times 0.77 \times 0.69 \times 7,456}{2})$  male twin pairs lived in Finland in 1958. Considering all the above, the real number of twin pairs can be estimated to be 1,251–1,563. (9)

The letters sent to 608 local register authorities managed to gather basic information on 2,933 twin pairs. This figure also included deceased twins. In total, 1,044 twin pairs satisfied the criteria of the target population. However, 142 twin pairs were excluded due to refusals, illnesses and logistical problems, leaving a total of 902 interviewable twin pairs. (9) We used statistics from the IDB cohort to form the first data point for our study. Altogether, 1,804 individuals participated in our study. The summary of data collection for the first data point of our study is presented in [Figure 1](#).



**Figure 1.** Study selection protocol; IDB (1958), FTC (1981) and FT16 (2010-2012)

### 4.3 *The Older Finnish Twin Cohort (FTC)*

The Older Finnish Twin Cohort commenced in 1975, and it forms an exceedingly representative nationwide data base for genetic epidemiological studies. The cohort was hosted by the Department of Public Health, University of Helsinki, and The Central population Registry of Finland provided the twin data base. A substantial number of studies have used the cohort to primarily study risk factors for chronic disease and health-related behavior. The studies revealed captivating results, e.g., lower education decreased the amount of leisure time physical activity (LTPA) during a 35-year follow-up (30). Subjects from the FTC have also participated in multiple international projects such as *GenomEUtwin*, which comprises cohorts from seven different European countries. Initially, the cohort consisted of 13,888 same-sexed twin pairs born in Finland before 1958, with both co-twins alive in 1967. In 1996, the original database was supplemented with opposite-sexed twins. (38–42)

The zygosity of the twins was determined with two questions on how closely they resembled each other in terms of appearance in their childhood. Altogether, 93% of twins were identified as monozygotic (MZ) or dizygotic (DZ). Blood samples were then drawn from 104 twin pairs to confirm the accuracy of the questionnaire data; the results were relatively accurate when compared to the blood marker tests. (38–42)

The baseline 1975 questionnaire had a considerably high response rate of 89%. Three follow-up questionnaires were sent in 1981 (wave 2), 1990 (wave 3), and 2011–2012 (wave 4, one of three sub-studies conducted between 1999 and 2017), with response rates of 84%, 77%, and 72%, respectively. In addition, several clinical studies have been conducted with certain subsets of twins. Regular vital status follow-ups have also provided data for mortality analyses. The mortality and morbidity data were obtained from national medical registers. (38–42)

The questionnaires were very similar and vast majority of the items were multiple choice in order to make answering and data processing easier. The questionnaires consisted of the following sections: Biographical data, General health, Sleep characteristics, Smoking-related characteristics, Alcohol-related characteristics, Eating habits, Physical activity characteristics, Work and education and Life satisfaction. (38–42)

The 1981 questionnaire was targeted only to biological twin pairs. Altogether, a total of 24,684 subjects replied to the 1981 questionnaire, 11,929 (48%) of them were male. (42) We used data from the 1981 questionnaire to act as a second data point for our study. Since we only assessed

males aged 28–38, the sample size decreased from 24,684 to 4,284 individuals. The summary of data collection for the second data point of our study is presented in [Figure 1](#).

#### 4.4 *The FinnTwin16 Cohort (FT16)*

The FinnTwin16 Cohort is a longitudinal study consisting of Finnish twins born in 1974–1979. The cohort was established in 1991 with the original intention of addressing genetic and environmental risk factors of alcoholism. Later on, however, the study was expanded to include a larger amount of data associated with precursors for disease and health-related behavior. The cohort was specifically designed to observe and study these factors during the adolescence-adulthood transition. In addition to twins born in 1974–79, their parents, siblings and spouses also participated in the study at its different stages. (43) Studies based on the FT16 cohort have revealed fascinating results on many topics, e.g., leisure time physical activity motives were associated with genetic factors and changes in mitochondrial metabolism resulted from acquired obesity (44, 45).

In total, the study has had five waves to date, and planning for wave six has been initiated. In waves 1–3, questionnaires were sent to twins when they reached 16, 17 and 18.5 years of age. For the oldest age group, questionnaires were sent in 1991–1993, while for the youngest age group these questionnaires were sent in 1996–1998. Response rates and questionnaire response intervals for waves 1–3 were 90%, 95%, and 94%, and 60 days, 90 days, and 90 days, respectively. Wave 1–3 questionnaires mainly assessed health habits, such as alcohol and tobacco use, physical activity and eating habits. When the twins reached young adulthood (mean age of 24.5 years), wave four questionnaires were sent with a response rate of 85%. In the fourth-wave questionnaire, questions on life satisfaction, romantic relationships and sexuality, oral health and eating disorders were added to complement previous questions from waves 1–3. (43)

The fifth wave was conducted between 2010 and 2012. Thus, the twins were 32–38 years old during the survey. The fifth-wave questionnaire was internet-based, contrary to previous questionnaires which were mail surveys. Altogether, 4407 subjects responded, and 1963 (45%) of them were male. The response rate was 72%, which was significantly lower than in previous waves. In addition to many of the topics covered in waves 1–4, new items were added, such as reading disabilities and physical-activity-related motivation. (43) The questionnaire consisted of the following sections: demographics, general health, weight and weight control, physical



exercise, human relationships and offspring, alcohol- and tobacco-related characteristics, eating habits, life satisfaction and events in life.

The third data point used in this study was wave five of FT16 (2010–2012), since the twins were in their mid-thirties and satisfied the age prerequisites for our study. In total, 1890 of the 1963 respondents provided sufficient data. A summary of data collection for the third data point of our study is presented in [Figure 1](#).

#### 4.5 *Health and health-related behavior profile variables*

We identified variables from the IDB, FTC and FT16 surveys to describe socio-demographic characteristics, health-related behavior, and disease prevalence. In order to avoid possible biases, the survey questions had to be comparable with each other in terms of design and answer categories. If the answer categories differed from each other, we remodeled them to be as similar as possible (e.g., two small categories were combined), and if this was not successful, the variables were assessed separately or left out. Also, we only analyzed variables with a data point in the IDB survey since it was the main topic of interest. Most variables in this study had two or more data points, however, we also included some variables with only one data point. All health and health-related behavior profile variables (except education) were used as dependent variables in the educational level comparison.

Socio-demographic characteristics included age, education, current work status, relationship status, children, height, weight and body mass index (BMI). Age was described as a continuous variable as well as classified into three categories: 28–30, 31–34 and 35–38 years old. Education is described thoroughly in paragraph 4.6. Current work status included the following classes: employed, stay-at-home father, student, unemployed, retired and other. Relationship status was reclassified into two categories: married or in a relationship, or single. Also, relationship length with current spouse (years) was presented as a continuous variable. Possible children were reported as a yes/no-variable, and the number of children was presented as a continuous variable. Height, weight and calculated BMI were examined as continuous variables.

Health-related behavior comprised of smoking and alcohol-related characteristics, physical activity characteristics, eating habits and coffee drinking. Smoking status was reported with two classes in the IDB sample, current and non-current. For FTC and FT16, smoking status was presented in four classes: current, occasional, former and never. Furthermore, if the subject

was a current smoker, their CPD was reported. The FTC and FT16 answer categories for CPD were incomparable, however, CPD was reported as a continuous variable in IDB. Thus, we remodeled the continuous variable of IDB to match both (FTC and FT16) response categories, which allowed us to compare FTC and FT16 separately with IDB. Therefore, the answer categories for CPD were classified as follows:  $\leq 10$ , 10–19 and 21+ CPD (IDB&FT16 comparison) and  $< 10$ , 10–19 and 20+ CPD (IDB&FTC comparison). The general frequency of alcohol consumption was divided into daily, weekly, and monthly drinkers, and furthermore into those who drank a few times a year, once a year or less frequently, and into those who did not drink alcohol. The general alcohol consumption per occasion (drinks) was classified as follows:  $\leq 2$ , 3–4, 5–9, 10–15 and  $\geq 16$  drinks per occasion. Lifelong sobriety was examined as a dichotomous yes/no-variable. Physical activity was queried by one question in 1958: “Have you participated in athletics?”, and it included the following response categories: very much, much, somewhat, not much, and not at all. Eating habits consisted of the avoidance of greasy foods and coffee drinking status; both were yes/no-variables. Also, coffee consumption was measured with daily cups of coffee (continuous variable).

The disease prevalence section included diabetes, hypertension, overweight and obesity, asthma, and epilepsy. All the variables concerning disease prevalence were dichotomized as yes or no. Diabetes was further divided into type 1 and 2 diabetes mellitus (T1DM and T2DM). Also, overweight and obesity was further divided into overweight ( $25 \text{ kg/m}^2 \leq \text{BMI} < 30 \text{ kg/m}^2$ ) and obesity ( $\text{BMI} > 30 \text{ kg/m}^2$ ) within the variable.

#### 4.6 *Definition of educational levels and sensitivity analyses*

To analyse the effects of one’s educational attainment on their health and health-related behavior profile, educational levels must first be defined. All the surveys (IDB, FTC and FT16) had questions about educational levels, however, they were not identical. In the FTC and FT16 questionnaires, the subjects were asked to place themselves into one or several educational categories, which made analysing the data simple. An open question: “What is your education?” was presented in the IDB interview, therefore, we coded each answer to match the data format of the later surveys. In addition, we calculated the years of education from the IDB’s open answers for sensitivity analyses and future research. We then dichotomized the subjects into two categories, high and low educational level. High educational level was defined as having completed senior high school with or without a college or a university (of applied sciences) degree. Low educational level was defined as having no senior high school

or college/university (of applied sciences) education. Thus, educational level was used as an independent two-classed variable in the educational level comparison.

It must be noted that substantial changes were made in the Finnish education system between the IDB (1958), FTC (1981) and FT16 (2010–2012) surveys. The largest change was the transition to the new comprehensive school system between 1972 and 1977. This reform extended compulsory education from six to nine years, and therefore it was considered appropriate to transfer teacher training from teacher training colleges known here as “teacher seminars” to universities in 1974. Hence, an exception was made in our educational classification considering teachers; all subjects with “teacher seminar”-training in IDB were classified in the high education group although they did not complete senior high school.

The educational level distributions formed by senior high school education do not necessarily reflect the high and low levels of education in 1958, 1981 and 2010–2012, since general trends in education have changed over time. This was due, for example, to a change in the level of compulsory education. The time-period of our research was extensive, so the formation of biases related to education was possible. Therefore, we performed two sensitivity analyses alongside the original analysis (original model) to make the educational level comparison more representative. The first sensitivity analysis (model 1) was made using the averages of years of education (IDB) and educational categories (FTC and FT16). We then divided the educational groups below or above the calculated averages. However, the distributions formed by the averages differed significantly: IDB (1958) – Low 60.3%/39.7% High; FTC (1981) – Low 73.1%/26.9% High; FT16 (2010–2012) – Low 41%/59% High. Thus, in the second sensitivity analysis (model 2), the educational groups were dichotomised by forming distributions that most closely resembled each other: IDB (1958) – Low 68.1%/31.9% High; FTC (1981) – Low 73.1%/26.9% High; FT16 (2010–2012) – Low 75.9%/24.1% High.

#### 4.7 *Statistical analyses*

All statistical analyses were performed with SPSS Statistics version 25.0 (IBM Corp, Armonk, NY, USA). In the general population analysis, values of classed variables were tested by frequency distributions. Furthermore, results for continuous variables were assessed as mean and standard deviation (SD).

When examining the significance of the differences between educational levels, we used logistic regression analysis; specifically, binary logistic regression for two-classed variables

and multinomial logistic regression for variables with three or more classes. Statistical significances of absolute mean differences for continuous variables were calculated with independent-samples t-test. We computed odds ratios (OR) and absolute mean differences with 95% confidence intervals (CI) for all variables used in the educational level comparison. The less educated group was used as a reference group in all educational level analyses. Same statistical analyses were used in the sensitivity analyses.

## 5 Results

### 5.1 *Changes in health and health-related behavior profiles*

### 5.2 *Socio-demographic characteristics*

The changes in socio-demographic characteristics of the participants between 1958, 1981 and 2010–2012 are shown in [Table 1](#). The mean age of the participants was 32.7 in 1958, 32.9 in 1981 and 34.1 in 2010–2012. The proportion of highly educated participants increased from 4.6% (1958) to 59% (2010–2012). The employment rates decreased slightly during the whole study period. More participants were in a relationship or married in 2010–2012 compared to 1958, and the duration of the relationship with their current spouse was longer. Contrary to the 1981 and 2010–2012 surveys, all participants in a relationship in the 1958 survey were married. More participants had children in 1958 than in 2010–2012, and the average number of children also decreased during the study period. The participants were 7.6 cm taller and 11.5 kg heavier in 2010–2012 compared to 1958. In addition, the calculated BMI of the participants grew by 1.5 kg/m<sup>2</sup> during the whole study period.

**Table 1.** Socio-demographic characteristics of Finnish males in their thirties in 1958, 1981, and 2010-2012

<b>Socio-demographic characteristics</b>	<b>IDB (1958) (n=1804)</b>	<b>FTC (1981) (n=4284)</b>	<b>FT16 (2010-2012) (n=1890)</b>
<b>Age</b> Mean (SD)	32.7 (2.8)	32.9 (2.9)	34.1 (1.2)
<b>Age Classification (%)</b> 28-30 31-34 35-38	31.8 43.5 24.7	32.9 38.7 28.4	- 75.2 24.8
<b>Education (%)</b> Lower than senior high school Senior high school or higher Other Missing data (n)	95.3 4.6 0.1 N=4	81.3 13.9 4.8 N=10	41.0 59.0 - N=7
<b>Currently (%)</b> Employed Stay-at-home mother/father Student Unemployed Retired Other Missing data (n)	95.6 - - - - 4.4 N=2	93.4 0.0 1.5 2.9 2.0 - N=57	89.4 0.4 3.9 4.7 1.5 - N=110
<b>Relationship status (%)</b> Single In a relationship or married Missing data (n)	26.2 73.8 <sup>a</sup> -	27.7 72.4 N=4	21.2 78.8 -
<b>Relationship duration with current spouse (years)</b> Mean (SD) Missing data (n)	7.6 (3.5) -		8.4 (4.7) N=33
<b>Children (%)</b> Yes No Missing data (n)	87.3 <sup>b</sup> 12.7 <sup>b</sup> N=471 <sup>c</sup>	51.8 (50.2 <sup>d</sup> , 1.6 <sup>e</sup> ) 48.2 N=129	55.0 45.0 N=27
<b>Number of children (If children)</b> Mean (SD)	2.3 (1.3)	-	2.0 (1.1)
<b>Went to the Finnish armed forces (%)</b> Yes No Missing data (n)	94.2 5.8 N=1		
<b>Height and weight</b>			
<b>Height (cm)</b> Mean (SD) Missing data (n)	171.9 (6.1) N=5	176.4 (6.2) N=12	179.5 (6.6) N=14
<b>Weight (kg)</b> Mean (SD) Missing data (n)	71.6 (8.4) N=1	75.3 (10.3) N=19	83.1 (13.6) N=21
<b>Body mass index (BMI)</b> Mean (SD) Missing data (n)	24.2 (2.3) N=2	24.2 (2.9) N=25	25.7 (3.7) N=21
a = married b = If married or divorced c = If unmarried d = If married, cohabiting or divorced e = If unmarried or widow			

### 5.3 *Health-related behavior characteristics*

[Table 2](#) shows the changes in health-related behavior characteristics of the participants between 1958, 1981 and 2010–2012. The prevalence of active tobacco smoking decreased dramatically from 64.7% (1958) to 21.1% (2010–2012). However, when comparing the IDB (1958) and FT16 (2010–2012) surveys, FT16 had a greater proportion of heavy smokers (21+ CPD), and IDB had a higher proportion of light smokers ( $\leq 10$  CPD). There was no difference in CPD between the IDB (1958) and FTC (1981) surveys. The participants had a significantly larger general frequency of alcohol consumption in 2010–2012 compared to 1958; the absolute change in weekly drinking frequency was 50.2%. In addition, in 2010–2012, higher proportion of participants consumed 10 or more standard drinks per occasion than in 1958. Despite heavy episodic drinking being more popular in 2010–2012, drinking less than 3 drinks per occasion was more common in 2010–2012 than in 1958. Therefore, a widening was noticed in the general alcohol consumption per occasion between the two data points. Lifelong sobriety decreased considerably during the whole study period. An increase in coffee consumption was observed between 1958 and 1981. More participants avoided greasy foods in 2010–2012 than in 1958.

**Table 2.** Health-related behavior characteristics of Finnish males in their thirties in 1958, 1981, and 2010-2012

Health-related behavior	IDB (1958) (n=1804)	FTC (1981) (n=4284)	FT16 (2010-2012) (n=1890)
<b>Smoking-related characteristics</b>			
<b>Smoking status (%)</b>			
Current	64.7	42.4	21.1
Occasional	-	3.8	12.3
Former	-	23.2	22.8
Never	35.3 <sup>a</sup>	30.6	43.8
Missing data (n)	N=2	N=61	N=32
<b>Cigarettes smoked per day (if current smoker) (IDB&amp;FT16) (%)</b>			
10 or less	37.3	15.1 (<10)	27
11-20	49.3	42.6 (10-19)	52.8
21 or more	13.3	42.3 (20+)	20.2
Missing data (n)	-	N=5	-
<b>Cigarettes smoked per day (if current smoker) (IDB&amp;FTC) (%)</b>			
9 or less	15.5	15.1	27 (≤10)
10-19	42.6	42.6	52.8 (11-20)
20 or more	41.9	42.3	20.2 (21+)
Missing data (n)	-	N=5	-
<b>Alcohol-related characteristics</b>			
<b>General frequency of alcohol consumption (%)</b>			
Daily	0.1		5.4
Once a week	8.2		58.4
Once a month	31.3		21.2
Few times a year	32.5		7.5
Once a year or less frequently	20.0		1.9
Does not drink alcohol	8.1		5.6
Missing data (n)	N=26		N=24
<b>General alcohol consumption per occasion (drinks) (%)</b>			
2 or less	19.3		43.8
3-4	35.9		18.6
5-9	37.7		18.8
10-15	6.1		14.9
16 or more	1.0		3.9
Missing data (n)	N=163		N=137
<b>Lifelong sobriety (%)</b>			
Yes	8.1		2.3
No	91.9		97.7
Missing data (n)	N=26		-
<b>Physical activity</b>			
<b>Participated in athletics (%)</b>			
Very much	3.7		
Much	12.7		
Somewhat	36.1		
Not much	35.3		
Not at all	12.2		
Missing data (N)	-		

<b>Eating habits</b>			
<b>Avoiding greasy foods (%)</b>			
Yes	40.3		76.1
No	59.7		23.9
Missing data (n)	N=14		N=36
<b>Coffee drinker (%)</b>			
Yes	89.6	95.7	
No	10.4	4.3	
Missing data (n)	N=3	N=80	
<b>Coffee consumption (cups per day) (if coffee drinker)</b>			
Mean (SD)	5.3 (3.5)	5.4 (3.2)	-
Missing data (n)	N=3	N=80	-



### 5.4 Disease prevalence

The changes in disease prevalence of the participants between 1958, 1981 and 2010–2012 are shown in [Table 3](#). The prevalence of diabetes and epilepsy increased steadily during the whole study period. Hypertension prevalence had a significant increase between 1958 and 1981. However, there was a considerable decrease in hypertension prevalence between 1981 and 2010–2012. The number of participants with asthma increased dramatically during the whole study period; the largest increase was observed between 1981 and 2010–2012. Furthermore, the results indicate that there was a major increase in overweight and obesity ( $\text{BMI} > 25 \text{ kg/m}^2$ ) between 1958 and 2010–2012.

**Table 3.** Disease prevalence of Finnish males in their thirties in 1958, 1981, and 2010–2012

Disease prevalence	IDB (1958) (n=1804)	FTC (1981) (n=4284)	FT16 (2010–2012) (n=1890)
<b>Diabetes (%)</b>			
Yes	0.4	0.7	1.2 (0.7 <sup>a</sup> , 0.5 <sup>b</sup> )
No	99.6	99.3	98.8
Missing data (n)	N=1	N=31	N=45
<b>Hypertension (%)</b>			
Yes	1.7	8.2	3.1
No	98.3	91.8	96.9
Missing data (n)	-	N=33	N=41
<b>Overweight and obesity (%)</b>			
Yes	29.2 (27.1 <sup>c</sup> , 2.1 <sup>d</sup> )	34.0 (30.3 <sup>c</sup> , 3.6 <sup>d</sup> )	53.3 (42.2 <sup>c</sup> , 11.1 <sup>d</sup> )
No	70.8	66.0	46.7
Missing data (n)	N=2	N=26	N=21
<b>Asthma (%)</b>			
Yes	0.6	1.0	8.1
No	99.4	99.0	91.9
Missing data (n)	-	N=26	N=38
<b>Epilepsy (%)</b>			
Yes	0.2	0.9	1.6
No	99.8	99.1	98.4
Missing data (n)	N=175	N=30	N=47
a = Type 1 Diabetes Mellitus (T1DM) b = Type 2 Diabetes Mellitus (T2DM) c = $25 \text{ kg/m}^2 < \text{BMI} < 30 \text{ kg/m}^2$ d = $\text{BMI} > 30 \text{ kg/m}^2$			

### 5.5 *Health and health-related behavior profiles by educational levels*

[Tables 4](#), [5](#) and [6](#) show the differences and changes in health-related behavior by educational levels in 1958, 1981 and 2010–2012. High education was associated with lower odds of smoking in 1958 ( $P = 0.004$ ), 1981 ( $P < 0.001$ ) and 2010–2012 ( $P < 0.001$ ). No significant differences were found in or the number of CPD in 1958, but the less educated smokers had a higher CPD number both in 1981 ( $P < 0.001$ ) and 2010–2012 ( $P < 0.001$ ). The general frequency of alcohol consumption did not differ between the educational groups in 1958 or 2010–2012, but the occasional alcohol consumption did. Highly educated participants were less likely to consume 5–9 standard drinks at one sitting in 1958 ( $P = 0.008$ ) as well as 10–15 standard drinks at one sitting in 2010–2012 ( $P = 0.048$ ). High education was associated with lower odds of not participating in athletics in 1958 ( $P < 0.001$ ). There was no significant difference in whether the participants were coffee drinkers in 1958, but among coffee drinkers, the less educated consumed more coffee ( $P < 0.001$ ). In 1981, both the amount of coffee drinkers ( $P = 0.024$ ) and the average coffee consumption ( $P < 0.001$ ) differed significantly by educational levels. Furthermore, no significant differences were found in BMI or any diseases except asthma and diabetes between the educational level groups in 1958. Asthma ( $P = 0.003$ ) as well as diabetes ( $P = 0.018$ ) were more common in more educated men in 1958. Conversely, in 2010–2012, high education was associated with lower odds of asthma ( $P = 0.046$ ). Also, the highly educated were taller at all time points ( $P < 0.001$  in 1958, 1981 and 2010–2012). In 1958, highly educated participants were heavier ( $P = 0.042$ ), whereas in 1981 ( $P < 0.001$ ) and 2010–2012 ( $P = 0.002$ ), they were lighter.

**Table 4.** Health-related behaviour characteristics of Finnish males in their thirties with high *versus* low education in 1958, 1981 and 2010-2012; with Odds Ratios (OR) and 95% Confidence Intervals (CI) for likelihood of belonging to a category of a variable when having high *versus* low (*reference group*) education

	IDB (1958) (N=1804)			FTC (1981) (N=4284)			FT16 (2010-2012) (N=1890)		
Education	Low Ed.	High Ed.	OR (95%CI) High Ed. vs. Low Ed.	Low Ed.	High Ed.	OR (95%CI) High Ed. vs. Low Ed.	Low Ed.	High Ed.	OR (95%CI) High Ed. vs. Low Ed.
<b>Smoking status (%)</b>									
Current	1122 (65.4)	42 (50.0)	0.53 (0.34, 0.82) p=0.004	1579 (46.1)	151 (25.6)	0.34 (0.27, 0.42) p<0.001	257 (34.0)	134 (12.2)	0.18 (0.14, 0.24) p<0.001
Occasional	-	-	-	110 (3.2)	39 (6.6)	1.25 (0.85, 1.85) p=0.257	93 (12.3)	135 (12.3)	0.51 (0.38, 0.70) p<0.001
Former	-	-	-	793 (23.2)	134 (22.7)	0.60 (0.48, 0.75) p<0.001	193 (25.6)	231 (21.0)	0.42 (0.33, 0.54) p<0.001
Never	593 (34.6)	42 (50.0)	1.00 (ref)	940 (27.5)	266 (45.1)	1.00 (ref)	212 (28.1)	602 (54.6)	1.00 (ref)
<b>Missing data (N)</b>	N=6			N=272			N=33		
<b>Cigarettes smoked per day (if current smoker) (IDB&amp;FT16) (%)</b>									
10 or less	424 (37.8)	11 (26.2)	1.00 (ref)				49 (19.1)	57 (42.5)	1.00 (ref)
11-20	550 (49.0)	23 (54.8)	1.61 (0.78, 3.34) p=0.2				143 (55.6)	63 (47.0)	0.38 (0.23, 0.61) p<0.001
21 or more	148 (13.2)	8 (19.0)	2.08 (0.82, 5.28) p= 0.122				65 (25.3)	14 (10.4)	0.19 (0.09, 0.37) p<0.001
<b>Missing data (N)</b>	N=2						N=1		
<b>Cigarettes smoked per day (if current smoker) (IDB&amp;FTC) (%)</b>									
9 or less	176 (15.7)	5 (11.9)	1.00 (ref)	212 (13.5)	42 (28.6)	1.00 (ref)			
10-19	482 (43.0)	14 (33.3)	1.02 (0.36, 2.88) p=0.967	676 (42.9)	56 (38.1)	0.42 (0.27, 0.64) p<0.001			
20+	464 (41.4)	23 (54.8)	1.75 (0.65, 4.66) p=0.267	687 (43.6)	49 (33.3)	0.36 (0.23, 0.56) p<0.001			
<b>Missing data (N)</b>	N=4			N=61					
<b>General frequency of alcohol consumption (if alcohol drinker) (%)</b>									
Daily	1 (0.1)	0 (0.0)	N/A				53 (7.5)	47 (4.5)	0.75 (0.35, 1.62) p=0.59
Once a week	135 (8.7)	10 (13.5)	1.80 (0.78, 4.16) p=0.166				407 (57.3)	683 (65.0)	1.41 (0.72, 2.78) p=0.316
Once a month	526 (33.8)	28 (37.8)	1.30 (0.67, 2.50) p=0.438				167 (23.5)	229 (21.8)	1.16 (0.58, 2.21) p=0.685
Few times a year	554 (35.6)	22 (29.7)	0.97 (0.49, 1.92) p=0.924				67 (9.4)	73 (6.9)	0.92 (0.44, 1.93) p=0.820
Once a year or less frequently	341 (21.9)	14 (18.9)	1.00 (ref)				16 (2.3)	19 (1.8)	1.00 (ref)
<b>Missing data (N)</b>	N=26						N=24		
<b>General alcohol consumption per occasion (drinks) (If alcohol drinker) (%)</b>									
2 or less	294 (18.8)	22 (29.7)	1.00 (ref)				111 (22.6)	205 (24.2)	1.00 (ref)
3-4	557 (35.6)	31 (41.9)	0.74 (0.42, 1.31) p=0.304				194 (39.4)	371 (43.8)	1.04 (0.78, 1.35) p=0.813

5-9	598 (38.2)	19 (25.7)	0.43 (0.23, 0.80) p=0.008				85 (17.3)	147 (17.3)	0.94 (0.66, 1.33) p=0.715
10-15	99 (6.3)	1 (1.4)	0.14 (0.02, 1.01) p= 0.052				67 (13.6)	83 (9.6)	0.67 (0.45, 1.00) p=0.048
16 or more	16 (1.0)	1 (1.4)	0.84 (0.11, 6.59) p=0.864				35 (7.1)	42 (5.0)	0.65 (0.39, 1.08) p=0.094
<b>Missing data (N)</b>	N=8						N=137		
<b>Participation in athletics (%)</b>									
Very much	57 (3.3)	8 (9.6)	1.00 (ref)						
Much	202 (11.8)	25 (30.1)	0.88 (0.38, 2.06) p=0.771						
Somewhat	616 (35.9)	35 (42.2)	0.41 (0.18, 0.91) p=0.030						
Not much	624 (36.3)	13 (15.7)	0.15 (0.06, 0.37) p<0.001						
Not at all	218 (12.7)	2 (2.4)	0.07 (0.01, 0.32) p<0.001						
<b>Missing data (N)</b>	N=4								
<b>Coffee drinker (%)</b>									
Yes	1539 (89.8)	73 (86.9)	0.76 (0.39, 1.45) p=0.398	3274 (96.1)	551 (94.0)	0.64 (0.44, 0.95) p=0.024			
No	175 (10.2)	11 (13.1)	1.00 (ref)	134 (3.9)	35 (6.0)	1.00 (ref)			
<b>Missing data (N)</b>	N=7			N=290					

**Table 5.** Continuous variables of Finnish males in their thirties with high *versus* low education in 1958, 1981 and 2010-2012; with Absolute Mean Differences (MD) and 95% Confidence Intervals (CI) for variations in continuous variables when having high *versus* low (*reference group*) education

	IDB (1958) (N=1804)			FTC (1981) (N=4284)			FT16 (2010-2012) (N=1890)		
<b>Education</b>	Low Ed.	High Ed.	Mean difference (95%CI) High Ed. vs. Low Ed.	Low Ed.	High Ed.	Mean difference (95%CI) High Ed. vs. Low Ed.	Low Ed.	High Ed.	Mean difference (95%CI) High Ed. vs. Low Ed.
<b>Weight (kg)</b>									
Mean (SD)	71.5 (8.4)	73.4 (9.1)	1.91 (0.07, 3.8) p=0.042	75.6 (10.3)	73.7 (9.7)	-1.92 (-2.81, -1.03) p<0.001	84.2 (14.2)	82.3 (12.1)	-1.94 (-3.19, -0.68) p=0.002
<b>Missing data (N)</b>	N=5			N=231			N=22		
<b>Height (cm)</b>									
Mean (SD)	171.8 (6.1)	174.3 (5.9)	2.48 (1.15, 3.80) p<0.001	176.0 (6.1)	178.4 (6.1)	2.32 (1.80, 2.85) p<0.001	178.8 (6.9)	179.9 (6.4)	1.06 (0.46, 1.67) p=0.001
<b>Missing data (N)</b>	N=5			N=224			N=15		
<b>Body mass index (BMI)</b>									
Mean (SD)	24.2 (2.3)	24.1 (2.3)	-0.06 (-0.56, 0.44) p=0.807	24.4 (2.9)	23.1 (2.6)	-1.23 (-1.48, -0.99) p<0.001	26.3 (3.9)	25.4 (3.5)	-0.90 (-1.24, -0.56) p<0.001
<b>Missing data (N)</b>	N=6			N=236			N=22		
<b>Coffee consumption (cups per day) (if coffee drinker)</b>									
Mean (SD)	6.0 (3.1)	4.6 (3.1)	-1.43 (-2.17, -0.70) p<0.001	5.9 (3.1)	4.6 (2.7)	-1.26 (-1.54, -0.99) p<0.001			
<b>Missing data (N)</b>	N=2			N=200					

**Table 6.** Disease prevalence of Finnish males in their thirties with high *versus* low education in 1958, 1981 and 2010-2012; with Odds Ratios (OR) and 95% Confidence Intervals (CI) for likelihood of having a disease when having high *versus* low (*reference group*) education

	IDB (1958) (N=1804)			FTC (1981) (N=4284)			FT16 (2010-2012) (N=1890)		
Education	Low Ed.	High Ed.	OR (95%CI) High Ed. vs. Low Ed.	Low Ed.	High Ed.	OR (95%CI) High Ed. vs. Low Ed.	Low Ed.	High Ed.	OR (95%CI) High Ed. vs. Low Ed.
<b>Hypertension (%)</b>									
Yes	29 (1.7)	2 (2.4)	1.42 (0.33, 6.05) p=0.636	274 (8.0)	53 (8.9)	1.14 (0.84, 1.55) p=0.416	33 (4.4)	24 (2.2)	0.50 (0.29, 0.84) p=0.010
No	1687 (98.3)	82 (97.6)	1.00 (ref)	3172 (92.0)	540 (91.1)	1.00 (ref)	725 (95.6)	1066 (97.8)	1.00 (ref)
<b>Missing data (N)</b>	N=4			N=245			N=42		
<b>Diabetes (%)</b>									
Yes	6 (0.3)	2 (2.4)	7.04 (1.40, 35.4) p=0.018	21 (0.6)	6 (1.0)	1.67 (0.67, 4.15) p=0.272	13 (1.7)	9 (0.8)	0.47 (0.20, 1.11) p=0.085
No	1710 (99.7)	81 (97.6)	1.00 (ref)	3426 (99.4)	587 (99.0)	1.00 (ref)	738 (98.3)	1084 (99.2)	1.00 (ref)
<b>Missing data (N)</b>	N=5			N=244			N=46		
<b>Overweight and obesity (%)</b>									
Obese	36 (2.1)	1 (1.2)	0.56 (0.08, 4.2) p=0.573	139 (4.0)	12 (2.0)	0.40 (0.22, 0.72) p=0.003	113 (14.8)	94 (8.5)	0.45 (0.33, 0.61) p<0.001
Overweight	465 (27.1)	23 (27.4)	1.00 (0.61, 1.64) p=0.997	1123 (32.5)	106 (17.9)	0.44 (0.35, 0.54) p<0.001	344 (45.0)	445 (40.3)	0.70 (0.58, 0.86) p<0.001
Normal	1214 (70.8)	60 (71.4)	1.00 (ref)	2192 (63.5)	475 (80.1)	1.00 (ref)	307 (40.2)	565 (51.2)	1.00 (ref)
<b>Missing data (N)</b>	N=5			N=237			N=22		
<b>Epilepsy</b>									
Yes	4 (0.3)	0 (0.0)	N/A	36 (1.0)	3 (0.5)	0.48 (0.15, 1.57) p=0.226	14 (1.9)	16 (1.5)	0.79 (0.38, 1.63) p=0.529
No	1550 (99.7)	72 (100.0)	1.00 (ref)	3412 (99.0)	590 (99.5)	1.00 (ref)	742 (98.1)	1070 (98.5)	1.00 (ref)
<b>Missing data (N)</b>	N=178			N=243			N=48		
<b>Asthma (%)</b>									
Yes	8 (0.5)	3 (3.6)	7.91 (2.06, 30.4) p=0.003	35 (1.0)	8 (1.3)	1.34 (0.62, 2.89) p=0.464	73 (9.6)	77 (7.0)	0.71 (0.51, 0.99) p=0.046
No	1708 (99.5)	81 (96.4)	1.00 (ref)	3417 (99.0)	585 (98.7)	1.00 (ref)	685 (90.4)	1016 (93.0)	1.00 (ref)
<b>Missing data (N)</b>	N=4			N=239			N=39		

## 6 Discussion

### 6.1 *Summary of the findings*

This study sought to characterize stability and changes in health and health-related profiles of Finnish men in their thirties during 1958, 1981 and 2010–2012, and to examine differences in these profiles by educational levels. As mentioned in the introduction, tobacco smoking, alcohol use, high blood pressure, high BMI, and low educational level are salient risk factors for disease in Finland (1). Several fundamental changes occurred in these risk factors during the 54-year study period. Smoking prevalence decreased significantly. Conversely, alcohol use, BMI and educational level increased steadily. These results match those mentioned in earlier studies (3, 4, 8–10, 14, 17–19, 28, 46, 47). Furthermore, several health and health-related behavior disparities were observed between educational level groups. Highly educated participants were generally healthier; they had lower smoking prevalence, they were less likely to engage in heavy episodic drinking and had lower odds of being overweight or obese. These associations remained significant throughout the whole study period except for overweight and obesity in 1958. These findings are broadly consistent with previous research (4, 18, 19, 23, 24, 28, 48–54).

### 6.2 *Smoking*

To no surprise, smoking was very common in 1958, and ever since, smoking prevalence has decreased dramatically (3, 4, 14). Several factors play a role in this, such as legislative changes and anti-smoking campaigns, which have been shown to decrease smoking initiation (55, 56). Finland has a long history of anti-smoking measures. By the time Surgeon General published a report on the serious health effects of smoking in 1964, Finland started to make efforts to decrease smoking rates (57). The North Karelia project initiated in 1972 and one of its major priorities was to decrease high smoking prevalence (7). A few years later in 1976, Finland introduced the Tobacco Control Act (TCA). The legislation was enacted to provide stricter tobacco-control measures, such as advertising bans, sales restrictions, and public smoking restrictions. The TCA was later expanded to include the prohibition of smoking at workplaces, restaurants, and bars. (24, 58) Ever since the TCA commenced, smoking has gradually become to be seen as more and more deviant and socially unacceptable. It is now seen as a significant risk factor for disease, considering public opinion (59). Furthermore, the availability of

cigarette substitutes, namely smokeless tobacco (snus) and e-cigarettes, seems to somewhat reduce smoking rates (60, 61).

Interestingly, our results indicated that the prevalence of heavy smoking (20+ CPD) increased significantly, although total smoking decreased. This finding was unexpected and there are not many possible explanations for such a result. Some have suggested that the remaining population of smokers is more dependent on cigarettes since the less dependent have already quit. This has come to be known as the “hardening hypothesis”, which broadly states that smoking prevalence and dependence have an inverse relationship. (62, 63) However, most studies undermine this theory and suggest that lower prevalence correlates with lower dependence (64–66). In addition, it must be noted that high CPD number does not necessarily reflect high dependence per se, although it is generally used to measure the level of cigarette dependence. The characteristics of cigarettes have also changed over time, so the cigarettes with high nicotine content may be smoked less than earlier. Because smokers aim to maintain steady levels of nicotine (to avoid withdrawal symptoms), lighter cigarettes (those with less nicotine) may be smoked more leading to an apparent increase in heavy smokers. Blood or urinary measures of cotinine (the main metabolite of nicotine) would be needed to monitor longitudinal changes in actual nicotine intake.

### 6.3 *Alcohol use*

As expected, alcohol was used much less frequently in 1958 than it is today. These results match those mentioned in previous studies (18, 17). Major events, such as changes in alcohol policies, are reflected in total alcohol consumption. The consequences from these events are considered as “period effects” (67). In addition to legislative changes, public perception affects alcohol use (68). Furthermore, changes in alcohol consumption can also be cohort specific. “Cohort effects” are differences between birth cohorts due to the fact that certain environmental changes, e.g. societal changes, have varying effects on people of different ages (67). It is important to distinguish between the two effects for the proper development of alcohol policies (69).

The growth in total alcohol consumption in Finland began in the late 1950s and was particularly strong at the turn of the 1960s and 1970s. The Finnish alcohol policy was reformed in 1969 by



bringing medium beer to food stores and increasing the number of alcohol outlets. It is very likely that the reform had a major impact on total alcohol consumption since consumption increased by 50% in 1969. (18) Alcohol consumption plateaued in the beginning of the 1990s, when recession struck Finland. However, Finland's accession to the EU in 1994 brought the trend back upwards. In 2004, alcohol taxes were reduced by 30% and more alcohol could be imported from EU countries duty free. In the process, total alcohol consumption increased by 10%. However, total alcohol consumption peaked in 2008 and has been decreasing ever since. (17, 70) It seems likely that this reduction in alcohol use is due to the following reasons; alcohol taxes have been consistently raised since 2008 and public opinion has become more stringent about alcohol policy, probably since the dangers of alcohol use have become more evident to the general population. The public support for restrictive alcohol policy seems to have a positive relationship with total alcohol consumption in Finland. (68)

Our findings indicate that general alcohol consumption per occasion has become more polarized, meaning that moderate drinking has decreased, which subsequently has led to a relative increase in light and heavy drinking. Heavy episodic drinking seems to have a positive association with total alcohol consumption (17). Moreover, there is evidence that heavy episodic drinking increases systematically in younger cohorts (28). Our finding further supports these arguments. The latter study, however, did not find any significant difference in light drinking between older and younger cohorts, which is in contrast with our findings. (28) The discrepancies in light drinking trends can be partly explained by differences in study design and differences in how drinking habits were assessed.

#### 6.4 *High BMI*

As expected, the mean BMI and the prevalence of overweight and obesity increased substantially over the study period. These findings are in line with previous research (4, 19, 71, 72). In Finland, some leveling off was observed in the first decade of the 21<sup>st</sup> century, but the prevalence of overweight and obesity continued to grow in the following years (4, 73). Rising living standards, and changes in living environments and lifestyles are probable explanations for such results. The increase in energy supply per capita, and the changes in diet composition seem to significantly contribute to the rising mean BMI of the Finnish population (72, 74). Furthermore, sedentary lifestyle has become increasingly popular, thus decreasing the level of energy expenditure (71, 72).

### 6.5 *Differences by educational levels*

Smoking was observed to be significantly more common in less educated groups at all data points. Moreover, the differences between educational level groups have widened over the years implicating that educational attainment has an increasing impact on smoking prevalence. These findings further support the results from other studies (4, 23, 24, 49–52, 54). There are many likely causes for the increasing disparities between educational level groups, with respect to smoking status. It is believed that highly educated persons are better able to obtain information about the harmfulness of smoking than those with less education. In addition, the evidence suggests that the TCA had a larger impact on individuals with a higher socioeconomic status than on those with lower socioeconomic status. (52) One of the major instruments to reduce smoking rates in addition to the TCA, was price increases, which may have a larger impact on lower income groups (52, 54). Educational disparities seem to be better explained by the differences in smoking initiation rather than cessation and since the acquirement of education and smoking initiation usually take place at an early age, they are very closely related (48–51). It is hypothesized that price increases may have a greater impact on the initiation of smoking in individuals still pursuing higher education, such as university students, since they are less financially active compared to their less educated, working counterparts (52, 54). Also, since the less educated are more often heavy smokers, have a higher tobacco-dependence, and generally have stronger motives for smoking, tobacco price increases may have a weaker effect on them (54). Thus, tobacco price increases may widen the educational inequalities in smoking initiation instead of narrowing them.

Heavy smoking (20+ CPD) was more apparent in the less educated group in 2010–2012 but there was no significant difference between the educational level groups in 1958. The 2010–2012 results matched Pennanen’s 2014 findings in Finland (26). To our knowledge, there are no studies that have compared the prevalence of heavy smoking between educational level groups in Finland in 1950–1960s. Our original educational level classification model ascertained only 82 highly educated participants for the 1958 comparison. This unfortunately gave us quite low statistical power to detect differences between the educational level groups. However, sensitivity analysis models 1 and 2 revealed that more educated participants were, in fact heavier smokers than their less educated counterparts in 1958. We hypothesize that there are two likely factors that explain this finding. Firstly, the Finnish Medical Association (FMA)

issued its statement about the health effects of tobacco in 1960. Prior to the FMA's announcement, the health effects of tobacco were relatively unknown among the general population although smoking prevalence was already decreasing. Therefore, it could be speculated that tobacco-related health literacy was probably equal among all educational level groups. Secondly, the highly educated may have been financially more capable of purchasing tobacco products, thus increasing their intensity of smoking in 1958. Until the 1960s, smoking was socially accepted and very few restrictions on smoking were in force.

Contrary to expectations, no difference was found in the frequency of alcohol consumption between the educational level groups at any datapoints. This finding was unexpected since previous studies have demonstrated that the frequency of alcohol consumption is higher among the highly educated (18, 28). The 1958 results differ from previous ones, probably due to the lack of statistical power in the original model. However, sensitivity analysis models 1 and 2 detected significantly larger alcohol consumption frequencies among the highly educated in 1958. Highly educated individuals tend to drink less at a single sitting, and this could partly be reflected in their higher frequency of drinking (28).

As expected, heavy episodic drinking was significantly more common among the less educated participants at all datapoints. These results match those mentioned in earlier studies (18, 28). However, some studies have also shown results that are inconsistent with ours. An international study concluded that there were no differences in heavy episodic drinking between men with low and high educational attainment in Finland in 2000, although in other countries, heavy episodic drinking was associated with lower educational level (75). Nevertheless, there are many likely causes for these differences in heavy episodic drinking. One explanation might be the fact that highly educated individuals seem to engage in light drinking more often and are financially more capable of drinking in various situations, e.g., wines with food at restaurants. In other words, the less educated have more restricted drinking possibilities, which seems to guide them in the direction of heavy episodic drinking. (28)

Although the less educated had a significantly higher BMI and prevalence of overweight and obesity in 1981 and 2010–2012, no significant differences were located between the educational level groups in 1958. These findings differ from the FMC's 1966-1972 estimates of the educational attainment-related differences in BMI and overweight and obesity but are broadly consistent with data from the following years (4, 19, 23). The 1950-1960s (post-war) in Finland represented a transition phase from a developing and mostly rural (low-income)

country to a somewhat developed and more urban (middle-income) country as multiple industries experienced strong development. In developing countries, overweight and obesity are positively associated with high educational level. There are two likely causes for this. Firstly, less educated individuals are more likely to be short of food. Secondly, the less educated tend to be manual workers, resulting in a greater energy expenditure, which protects from overweight and obesity. Conversely, in developed countries, less educated people seem to consume more energy-rich foods, as healthier options are more expensive. (76) Considering the above, in 1958, there may have been some kind of a transitional period in the prevalence of overweight and obesity by level of education and, consequently, no differences were found between the groups considering these variables. Currently, overweight and obesity are significantly more common among the less educated in Finland (4)

## 6.6 *Sensitivity analyses*

The sensitivity analyses consisted of two additional educational level classification models (data not shown) for comparison between the original classification model. All sensitivity analysis models found significant differences in smoking status at all datapoints. Although the original model did not find significant differences in the CPD number in 1958, models 1 and 2 did, as mentioned earlier. According to model 1, high educational level was associated with higher odds of having a CPD number of 21+ ( $P < 0.001$ ). Model 2 found that high educational level was associated with a higher likelihood of having a CPD number of 11–20 ( $P = 0.018$ ) and 21+ ( $P < 0.001$ ). Contrary to the original model, models 1 and 2 also found significant differences in the general frequency of alcohol consumption in 1958. Weekly alcohol consumption was more common in the highly educated groups in model 1 ( $P = 0.002$ ) and 2 ( $P < 0.001$ ). No significant differences were observed in the frequency of alcohol consumption in 2010–2012 in any models. All models reported that heavy episodic drinking was significantly more common in the less educated group at all datapoints. The mean BMI and the prevalence of overweight and obesity did not differ significantly between the educational level groups in 1958 in any models.

To summarize, the results varied quite considerably when changing educational level classification methods. Therefore, we argue that it is very important to conduct sensitivity analyses in order to provide broader support for educational level studies.

## 6.7 *Strengths and limitations*

All surveys in this study relied on self-reported data. Therefore, there is a potential for response bias that may affect the assessment of risk factors and disease prevalence. For example, some smokers tend to give untruthful answers about their smoking habits, probably due to their perceived social stigma of smoking (77, 78). Furthermore, not all questions could be compared reliably due to design differences, most notably, disparities in answer categories. Unfortunately, the assessment of certain salient variables, namely high blood pressure and leisure time physical activity was not possible due to poor question design and lack of quantitative questions, respectively. There were also differences in data collection methods; IDB (1958) was an interview survey, FTC (1981) was a postal survey, and FT16 (2010–2012) was an internet survey. In addition, the survey response rates decreased over time, which is a limitation since it might lead to an overrepresentation of healthier participants in the younger cohorts as healthier individuals are more likely to respond (79).

A key strength of our study is the use of very representative datasets concerning our target population. The sample sizes are large and include a vast array of survey-regions in all three datasets, therefore providing us reliable national scale health profile data (9, 42, 43). The time-period of our study is exceptionally large (54 years), which gives us more accurate information of the trends in Finnish health profiles. Also, sensitivity analyses allow us to inspect the differences between educational level groups more accurately.

## 7 **Conclusions**

In conclusion, smoking prevalence decreased significantly whereas alcohol use, BMI, and educational level increased considerably among Finnish men in their thirties between 1958 and 2010–2012. Highly educated participants presented lower smoking prevalence, lower heavy episodic drinking, and lower BMI compared to their less educated counterparts. Although the average life expectancy of Finnish men has risen, there are numerous increasingly popular risk factors that need urgent intervention measures. Moreover, further health promotion efforts must be targeted at those with lower educational attainment both in adolescence, and throughout adulthood.

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## 9 Appendix 1

### Frequency distributions of the IDB survey questions (in Finnish):

#### A. Taustatiedot

##### Kysymys 3 Pääkieli

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	suomi	1645	91.2	91.2	91.2
	ruotsi	159	8.8	8.8	100.0
	Total	1804	100.0	100.0	

##### Kysymys 4 Ovatko vanhempanne elossa

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	molemmat vanhemmat elossa	731	40.5	40.6	40.6
	isä kuollut v.	576	31.9	32.0	72.6
	äiti kuollut v.	175	9.7	9.7	82.3
	äidistä ei tietoa	24	1.3	1.3	83.7
	isästä ei tietoa	284	15.7	15.8	99.4
	35	10	.6	.6	100.0
	Total	1800	99.8	100.0	
Missing	System	4	.2		
Total		1804	100.0		

##### Kysymys 5 Minkä ikäinen äitinne on

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	24	1	.1	.1	.1
	25	1	.1	.1	.1
	26	1	.1	.1	.2
	28	1	.1	.1	.2
	29	1	.1	.1	.3
	30	2	.1	.1	.4
	31	4	.2	.2	.6
	33	3	.2	.2	.8

35	4	.2	.2	1.0
36	2	.1	.1	1.1
37	3	.2	.2	1.3
38	1	.1	.1	1.4
39	7	.4	.4	1.8
40	4	.2	.2	2.0
41	1	.1	.1	2.1
42	2	.1	.1	2.2
43	4	.2	.2	2.4
44	5	.3	.3	2.7
45	4	.2	.2	2.9
46	3	.2	.2	3.1
47	4	.2	.2	3.3
48	13	.7	.7	4.1
49	5	.3	.3	4.3
50	14	.8	.8	5.1
51	14	.8	.8	5.9
52	31	1.7	1.8	7.7
53	33	1.8	1.9	9.6
54	59	3.3	3.4	13.0
55	35	1.9	2.0	15.0
56	68	3.8	3.9	18.8
57	70	3.9	4.0	22.8
58	90	5.0	5.1	28.0
59	71	3.9	4.1	32.0
60	104	5.8	5.9	38.0
61	70	3.9	4.0	42.0
62	79	4.4	4.5	46.5
63	87	4.8	5.0	51.5
64	63	3.5	3.6	55.1
65	94	5.2	5.4	60.4
66	71	3.9	4.1	64.5
67	99	5.5	5.7	70.1
68	73	4.0	4.2	74.3
69	87	4.8	5.0	79.3
70	92	5.1	5.3	84.5
71	32	1.8	1.8	86.4
72	44	2.4	2.5	88.9
73	45	2.5	2.6	91.4
74	30	1.7	1.7	93.1

	75	45	2.5	2.6	95.7
	76	19	1.1	1.1	96.8
	77	20	1.1	1.1	97.9
	78	16	.9	.9	98.9
	79	8	.4	.5	99.3
	80	7	.4	.4	99.7
	81	1	.1	.1	99.8
	82	3	.2	.2	99.9
	83	1	.1	.1	100.0
	Total	1751	97.1	100.0	
Missing	System	53	2.9		
Total		1804	100.0		

### Kysymys 6 Oliko tai onko Teillä sisaruksia kaksosveljenne ohella

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	1652	91.6	92.2	92.2
	ei	140	7.8	7.8	100.0
	Total	1792	99.3	100.0	
Missing	System	12	.7		
Total		1804	100.0		

### Kysymys 7 Jos kyllä / ovatko he Teitä...

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kaikki nuorempia	284	15.7	17.1	17.1
	kaikki vanhempia	572	31.7	34.4	51.5
	on sekä vanhempia että nuorempia	806	44.7	48.5	100.0
	Total	1662	92.1	100.0	
Missing	System	142	7.9		
Total		1804	100.0		

### Kysymys 8 Asutteko...

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	omassa talossanne	942	52.2	52.4	52.4
	omassa osakehuoneistossanne	90	5.0	5.0	57.5
	päävuokralaisena	619	34.3	34.5	91.9
	alivuokralaisena tai asukkina	136	7.5	7.6	99.5
	oletteko ilman vakinaista asuntoa	9	.5	.5	100.0
	Total	1796	99.6	100.0	
Missing	System	8	.4		
Total		1804	100.0		

**Kysymys 9 Montako huonetta Teidän tai perheenne käytössä on  
(keittiö luetaan huoneeksi)**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1	.1	.1	.1
	1	252	14.0	14.0	14.1
	2	577	32.0	32.1	46.2
	3	545	30.2	30.3	76.6
	4	236	13.1	13.1	89.7
	5	124	6.9	6.9	96.6
	6	34	1.9	1.9	98.5
	7	11	.6	.6	99.1
	8	8	.4	.4	99.6
	9	5	.3	.3	99.8
	10	1	.1	.1	99.9
	11	1	.1	.1	99.9
	12	1	.1	.1	100.0
	Total	1796	99.6	100.0	
Missing	System	8	.4		
Total		1804	100.0		

**Kysymys 10 Montako henkilöä näissä huoneissa nykyisin asuu**

	Frequency	Percent	Valid Percent	Cumulative Percent
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Valid	1	91	5.0	5.1	5.1
	2	218	12.1	12.1	17.2
	3	398	22.1	22.2	39.4
	4	415	23.0	23.1	62.5
	5	298	16.5	16.6	79.1
	6	161	8.9	9.0	88.0
	7	105	5.8	5.8	93.9
	8	55	3.0	3.1	96.9
	9	30	1.7	1.7	98.6
	10	12	.7	.7	99.3
	11	4	.2	.2	99.5
	12	5	.3	.3	99.8
	13	1	.1	.1	99.8
	15	2	.1	.1	99.9
	30	1	.1	.1	100.0
	Total	1796	99.6	100.0	
Missing	System	8	.4		
Total		1804	100.0		

### Kysymys 13 Olisitteko halunnut jatkaa koulunkäyntiänne

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	636	35.3	35.7	35.7
	ei	1147	63.6	64.3	100.0
	Total	1783	98.8	100.0	
Missing	System	21	1.2		
Total		1804	100.0		

### Kysymys 15 Oletteko...

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	työnantaja	26	1.4	1.4	1.4
	yksityisyrittäjä	466	25.8	25.9	27.3



	toisen palkallisessa palveluksessa	1222	67.7	67.8	95.1
	muu	80	4.4	4.4	99.6
	Työnantaja	1	.1	.1	99.6
	Yksityisyrittäjä	7	.4	.4	100.0
	Total	1802	99.9	100.0	
Missing	System	2	.1		
Total		1804	100.0		

### Kysymys 18 Kun vertailette omaa ja isänne yhteiskunnallista, oletteko...

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Kohonnut ylempään asemaan	543	30.1	30.1	30.1
	ei muutosta	978	54.2	54.3	84.4
	laskenut alempaan asemaan	220	12.2	12.2	96.6
	ei osaa sanoa	61	3.4	3.4	100.0
	Total	1802	99.9	100.0	
Missing	System	2	.1		
Total		1804	100.0		

## B. Kaksosten väliset suhteet

### 1. Keskinäiset suhteet

#### Kysymys 19a Ovatko vanhempanne joskus erehtyneet Teistä ja kaksosveljestänne

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	274	15.2	15.2	15.2
	ei	1485	82.3	82.4	97.6
	ei osaa sanoa	43	2.4	2.4	100.0
	Total	1802	99.9	100.0	
Missing	System	2	.1		
Total		1804	100.0		

#### Kysymys 19b Ovatko opettajanne joskus erehtyneet Teistä ja kaksosveljestänne

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	537	29.8	29.9	29.9
	ei	1224	67.8	68.1	97.9
	ei osaa sanoa	37	2.1	2.1	100.0
	Total	1798	99.7	100.0	
Missing	System	6	.3		
Total		1804	100.0		

**Kysymys 19c Ovatko tuttavanne joskus erehtyneet Teistä ja kaksosveljestänne**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	861	47.7	47.9	47.9
	ei	919	50.9	51.1	99.0
	ei osaa sanoa	18	1.0	1.0	100.0
	Total	1798	99.7	100.0	
Missing	System	6	.3		
Total		1804	100.0		

**Kysymys 20 On olemassa identtisiä ja ei-identtisiä kaksosia. Mihin ryhmään Te kuulutte**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	identtiseen	449	24.9	24.9	24.9
	ei-identtiseen	1127	62.5	62.5	87.4
	ei osaa sanoa	228	12.6	12.6	100.0
	Total	1804	100.0	100.0	

**Kysymys 21a Mitä piditte lapsuudessa siitä, että olitte kaksonen**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	erittäin mukavaa	130	7.2	7.2	7.2
	mukavaa	1251	69.3	69.7	76.9

	yhden tekevää	334	18.5	18.6	95.5
	epämukavaa	76	4.2	4.2	99.8
	erittäin epämukavaa	4	.2	.2	100.0
	Total	1795	99.5	100.0	
Missing	System	9	.5		
Total		1804	100.0		

### Kysymys 21b Mitä piditte nuoruudessa siitä, että olitte kaksonen

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	erittäin mukavaa	132	7.3	7.3	7.3
	mukavaa	1285	71.2	71.5	78.9
	yhden tekevää	306	17.0	17.0	95.9
	epämukavaa	69	3.8	3.8	99.8
	erittäin epämukavaa	4	.2	.2	100.0
	Total	1796	99.6	100.0	
Missing	System	8	.4		
Total		1804	100.0		

### Kysymys 21c Mitä pidätte nyt siitä, että olette kaksonen

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	erittäin mukavaa	136	7.5	7.6	7.6
	mukavaa	1180	65.4	65.6	73.2
	yhden tekevää	443	24.6	24.6	97.8
	epämukavaa	32	1.8	1.8	99.6
	erittäin epämukavaa	8	.4	.4	100.0
	Total	1799	99.7	100.0	
Missing	System	5	.3		
Total		1804	100.0		

### Kysymys 23 Kun pysyvästi erositte kaksosveljestänne tuntuiko Teistä...

	Frequency	Percent	Valid Percent	Cumulative Percent
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Valid	että olitte jollain tavalla pettäneet toisianne	12	.7	.8	.8
	että oli vaikea erota	467	25.9	29.6	30.4
	että ei ollut erikoisia tunteita eroamisesta	968	53.7	61.4	91.8
	että oli helpotus päästä eroon	15	.8	1.0	92.7
	ei osaa sanoa	115	6.4	7.3	100.0
	Total	1577	87.4	100.0	
Missing	System	227	12.6		
Total		1804	100.0		

**Kysymys 25a Kun Teillä lapsuudessa oli vaikeita murheita tai ongelmia oliko Teillä tapana kertoa näistä kaksosveljelle**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	oli aina tapana	478	26.5	26.9	26.9
	oli yleensä tapana	751	41.6	42.2	69.0
	ei osaa sanoa	63	3.5	3.5	72.6
	ei ollut juuri tapana	408	22.6	22.9	95.5
	ei ollut koskaan tapana	80	4.4	4.5	100.0
	Total	1780	98.7	100.0	
Missing	System	24	1.3		
Total		1804	100.0		

**Kysymys 25b Kun Teillä nuoruudessa oli vaikeita murheita tai ongelmia oliko Teillä tapana kertoa näistä kaksosveljelle**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	oli aina tapana	417	23.1	23.2	23.2
	oli yleensä tapana	772	42.8	42.9	66.1
	ei osaa sanoa	48	2.7	2.7	68.8
	ei ollut juuri tapana	484	26.8	26.9	95.7
	ei ollut koskaan tapana	77	4.3	4.3	100.0
	Total	1798	99.7	100.0	
Missing	System	6	.3		
Total		1804	100.0		

**Kysymys 25c Kun Teillä Nyt on vaikeita murheita tai ongelmia onko Teillä tapana kertoa näistä kaksosveljelle**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	on aina tapana	270	15.0	15.0	15.0
	on yleensä tapana	692	38.4	38.6	53.6
	ei osaa sanoa	58	3.2	3.2	56.8
	ei ole juuri tapana	608	33.7	33.9	90.7
	ei ole koskaan tapana	167	9.3	9.3	100.0
	Total	1795	99.5	100.0	
Missing	System	9	.5		
Total		1804	100.0		

## 2. Erilaisuus ja samankaltaisuus

**Kysymys 28 Olitteko Te lapsuudessanne puettu samalla lailla tai eri lailla kuin kaksosveljenne**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	miltei aina samalla lailla	713	39.5	39.6	39.6
	yleensä samalla lailla	809	44.8	45.0	84.6
	ei voi sanoa	46	2.5	2.6	87.2
	yleensä eri lailla	183	10.1	10.2	97.3
	miltei aina eri lailla	48	2.7	2.7	100.0
	Total	1799	99.7	100.0	
Missing	System	5	.3		
Total		1804	100.0		

**Kysymys 29 Oliko tämä samankaltaisuus/erilaisuus pukeutumisessa mielestänne**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	erittäin mieluisaa	178	9.9	10.0	10.0

	mieluisaa	1066	59.1	59.8	69.8
	yhdentekevää	363	20.1	20.4	90.2
	vastenmielistä	164	9.1	9.2	99.4
	erittäin vastenmielistä	11	.6	.6	100.0
	Total	1782	98.8	100.0	
Missing	System	22	1.2		
Total		1804	100.0		

**Kysymys 30a Oliko toinen teistä yleensä parempi oppilas koulussa alaluokilla**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	haastateltava	489	27.1	27.5	27.5
	kaksosveli	579	32.1	32.6	60.2
	ei eroja	707	39.2	39.8	100.0
	Total	1775	98.4	100.0	
Missing	System	29	1.6		
Total		1804	100.0		

**Kysymys 30b Oliko toinen teistä yleensä parempi oppilas koulussa yläluokilla**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	haastateltava	523	29.0	29.7	29.7
	kaksosveli	576	31.9	32.7	62.4
	ei eroja	663	36.8	37.6	100.0
	Total	1762	97.7	100.0	
Missing	System	42	2.3		
Total		1804	100.0		

**Kysymys 31 Kumpi oli koulussa parempi laskennossa**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	haastateltava	551	30.5	31.1	31.1
	kaksosveli	601	33.3	33.9	65.0
	ei eroja	619	34.3	35.0	100.0
	Total	1771	98.2	100.0	
Missing	System	33	1.8		
Total		1804	100.0		

### Kysymys 32 Kumpi oli koulussa parempi ainekirjoituksessa

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	haastateltava	503	27.9	28.5	28.5
	kaksoseveli	514	28.5	29.2	57.7
	ei eroja	745	41.3	42.3	100.0
	Total	1762	97.7	100.0	
Missing	System	42	2.3		
Total		1804	100.0		

### Kysymys 33a Kumpi oli vanhempi lapsuudessa

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	haastateltava	708	39.2	39.4	39.4
	kaksoseveli	706	39.1	39.3	78.8
	ei eroja	381	21.1	21.2	100.0
	Total	1795	99.5	100.0	
Missing	System	9	.5		
Total		1804	100.0		

### Kysymys 33b Kumpi oli vanhempi nuoruudessa

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	haastateltava	677	37.5	37.7	37.7
	kaksoseveli	687	38.1	38.2	75.9
	ei eroja	433	24.0	24.1	100.0
	Total	1797	99.6	100.0	
Missing	System	7	.4		
Total		1804	100.0		

### Kysymys 33c Kumpi on vanhempi nyt

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	haastateltava	622	34.5	34.6	34.6

	kaksosveli	666	36.9	37.0	71.6
	ei eroja	510	28.3	28.4	100.0
	Total	1798	99.7	100.0	
Missing	System	6	.3		
Total		1804	100.0		

### Kysymys 34a Kumpi yleensä voitti kun tappelitte lapsuudessa

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yleensä haastateltava	528	29.3	30.1	30.1
	yleensä kaksosveli	465	25.8	26.5	56.6
	ei osaa sanoa	746	41.4	42.6	99.2
	ei eroja	2	.1	.1	99.3
	vuorotellen	12	.7	.7	100.0
	Total	1753	97.2	100.0	
Missing	System	51	2.8		
Total		1804	100.0		

### Kysymys 34b Kumpi yleensä voitti kun tappelitte nuoruudessa

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yleensä haastateltava	458	25.4	26.2	26.2
	yleensä kaksosveli	404	22.4	23.1	49.3
	ei osaa sanoa	872	48.3	49.9	99.1
	ei eroja	2	.1	.1	99.3
	vuorotellen	13	.7	.7	100.0
	Total	1749	97.0	100.0	
Missing	System	55	3.0		
Total		1804	100.0		

### Kysymys 35a Kumpi veti yleensä pitemmän korren kun väittelitte keskenänne nuoruudessa

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yleensä haastateltava	327	18.1	18.6	18.6
	Yleensä kaksosveli	383	21.2	21.8	40.5



	ei osaa sanoa	1033	57.3	58.9	99.3
	ei eroja	2	.1	.1	99.4
	vuorotellen	10	.6	.6	100.0
	Total	1755	97.3	100.0	
Missing	System	49	2.7		
Total		1804	100.0		

**Kysymys 35b Kumpi vetää yleensä pitemmän korren kun väittelette keskenänne nykyään**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yleensä haastateltava	411	22.8	23.4	23.4
	yleensä kaksosveli	489	27.1	27.8	51.3
	ei osaa sanoa	844	46.8	48.1	99.3
	ei eroja	2	.1	.1	99.4
	vuorotellen	10	.6	.6	100.0
	Total	1756	97.3	100.0	
Missing	System	48	2.7		
Total		1804	100.0		

**Kysymys 36a Kumpi yleensä päätti mitä tehdään kun olitte yhdessä lapsuudessa**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yleensä haastateltava	363	20.1	22.8	22.8
	yleensä kaksosveli	372	20.6	23.4	46.2
	ei osaa sanoa	836	46.3	52.5	98.7
	ei eroja	5	.3	.3	99.0
	vuorotellen	16	.9	1.0	100.0
	Total	1592	88.2	100.0	
Missing	System	212	11.8		
Total		1804	100.0		

**Kysymys 36b Kumpi yleensä päätti mitä tehdään kun olitte yhdessä nuoruudessa**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yleensä haastateltava	415	23.0	23.9	23.9
	yleensä kaksosveli	383	21.2	22.0	45.9

	ei osaa sanoa	918	50.9	52.8	98.7
	ei eroja	6	.3	.3	99.1
	vuorotellen	16	.9	.9	100.0
	Total	1738	96.3	100.0	
Missing	System	66	3.7		
Total		1804	100.0		

**Kysymys 36c Kumpi yleensä päättää mitä tehdään kun olette yhdessä nykyään**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yleensä haastateltava	298	16.5	17.1	17.1
	yleensä kaksosveli	209	11.6	12.0	29.2
	ei osaa sanoa	1216	67.4	69.9	99.1
	ei eroja	5	.3	.3	99.4
	vuorotellen	11	.6	.6	100.0
	Total	1739	96.4	100.0	
Missing	System	65	3.6		
Total		1804	100.0		

**Kysymys 38a Oliko kaksosveljellänne yleensä samat vai eri harrastukset lapsuudessa**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	samat	1459	80.9	81.2	81.2
	ei osaa sanoa	50	2.8	2.8	84.0
	ei	288	16.0	16.0	100.0
	Total	1797	99.6	100.0	
Missing	System	7	.4		
Total		1804	100.0		

**Kysymys 38b Oliko kaksosveljellänne yleensä samat vai eri harrastukset nuoruudessa**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	samat	1280	71.0	71.2	71.2
	ei osaa sanoa	75	4.2	4.2	75.4
	ei	442	24.5	24.6	100.0
	Total	1797	99.6	100.0	
Missing	System	7	.4		

Total	1804	100.0		
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**Kysymys 38c Onko kaksosveljellänne nyt yleensä samat vai eri harrastukset**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	samat	780	43.2	43.6	43.6
	ei osaa sanoa	246	13.6	13.7	57.3
	ei	765	42.4	42.7	100.0
	Total	1791	99.3	100.0	
Missing	System	13	.7		
Total		1804	100.0		

**Kysymys 39 Oletteko itse urheillut**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	erittäin paljon	66	3.7	3.7	3.7
	paljon	229	12.7	12.7	16.4
	jonkin verran	652	36.1	36.1	52.5
	vähän	637	35.3	35.3	87.8
	ei lainkaan	220	12.2	12.2	100.0
	Total	1804	100.0	100.0	

**Kysymys 41 Olitteko Te nuoruudessa ihastunut samaan tyttöön**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	aina	11	.6	.6	.6
	usein	74	4.1	4.1	4.7
	joskus	377	20.9	20.9	25.7
	ei koskaan	1310	72.6	72.7	98.4
	ei voi sanoa	29	1.6	1.6	100.0
	Total	1801	99.8	100.0	
Missing	System	3	.2		
Total		1804	100.0		

**Kysymys 42 Jos 1-3/41 Kumpi enemmän seurusteli näitten tyttöjen kanssa**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	haastateltava	110	6.1	24.2	24.2
	kaksosveli	172	9.5	37.9	62.1
	ei voi sanoa	172	9.5	37.9	100.0
	Total	454	25.2	100.0	
Missing	System	1350	74.8		
Total		1804	100.0		

**Kysymys 43 Pyrittekö Te nuoruudessa yleensä olemaan samanlainen vai erilainen kuin kaksosveljenne**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	samanlainen	794	44.0	44.3	44.3
	yhdentekevää	417	23.1	23.3	67.5
	erilainen	582	32.3	32.5	100.0
	Total	1793	99.4	100.0	
Missing	System	11	.6		
Total		1804	100.0		

**Kysymys 44 Ketä käyttitte mittapuuna kun nuoruudessanne arvostelitte itseänne**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kaksosveljeä	537	29.8	30.1	30.1
	jotakuta muuta	818	45.3	45.8	75.9
	ei voi sanoa	428	23.7	24.0	99.8
	ei ketään	1	.1	.1	99.9
	Kaksosveljeä	2	.1	.1	100.0
	Total	1786	99.0	100.0	
Missing	System	18	1.0		
Total		1804	100.0		

**Kysymys 45a On eri mielipiteitä siitä onko identtisten kaksosten elämänkohtalo yleensä aivan samanlainen vai aivan erilainen. Mitä mieltä olette**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kohtalo aivan sama	148	8.2	8.2	8.2
	kohtalo melkein sama	946	52.4	52.7	61.0
	ei voi sanoa	177	9.8	9.9	70.8

	kohtalo aika erilainen	429	23.8	23.9	94.8
	kohtalo aivan erilainen	94	5.2	5.2	100.0
	Total	1794	99.4	100.0	
Missing	System	10	.6		
Total		1804	100.0		

**Kysymys 45b On eri mielipiteitä siitä onko ei-identtisten kaksosten elämäntilanne yleensä aivan samanlainen vai aivan erilainen. Mitä mieltä olette**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kohtalo aivan sama	44	2.4	2.4	2.4
	kohtalo melkein sama	587	32.5	32.7	35.1
	ei voi sanoa	179	9.9	10.0	45.1
	kohtalo aika erilainen	723	40.1	40.2	85.3
	kohtalo aivan erilainen	264	14.6	14.7	100.0
	Total	1797	99.6	100.0	
Missing	System	7	.4		
Total		1804	100.0		

### 3. Suhde perheeseen

**Kysymys 46 Olivatko vanhempanne mielestänne tyytyväisiä vai tyytymättömiä siihen että heillä oli kaksoset**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	erittäin tyytyväisiä	178	9.9	9.9	9.9
	tyytyväisiä	1363	75.6	75.6	85.5
	ei voi sanoa	183	10.1	10.1	95.6
	tyytymättömiä	73	4.0	4.0	99.7
	erittäin tyytymättömiä	3	.2	.2	99.8
	24	3	.2	.2	100.0
	Total	1803	99.9	100.0	
Missing	System	1	.1		
Total		1804	100.0		

**Kysymys 48 Oliko Teillä yleensä läheismepi suhde...**

	Frequency	Percent	Valid Percent	Cumulative Percent
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Valid	äitiinne	1147	63.6	64.2	64.2
	isääanne	280	15.5	15.7	79.9
	ei eroja	353	19.6	19.8	99.6
	12	7	.4	.4	100.0
	Total	1787	99.1	100.0	
Missing	System	17	.9		
Total		1804	100.0		

### Kysymys 49 Oliko kaksosveljellänne läheisempi suhde...

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	äitiinne	1115	61.8	62.7	62.7
	isääanne	264	14.6	14.8	77.6
	ei eroja	392	21.7	22.0	99.6
	12	7	.4	.4	100.0
	Total	1778	98.6	100.0	
Missing	System	26	1.4		
Total		1804	100.0		

### Kysymys 50a Oliko tai onko vanhemmillanne tapana viitata jompaan kumpaan teistä esimerkkinä toiselle

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	307	17.0	28.0	28.0
	ei	704	39.0	64.2	92.2
	ei osaa sanoa	85	4.7	7.7	99.9
	13	1	.1	.1	100.0
	Total	1097	60.8	100.0	
Missing	System	707	39.2		
Total		1804	100.0		

### Kysymys 50b Oliko tai onko vanhemmillanne tapana viitata jompaan kumpaan teistä esimerkkinä toiselle (Teihin)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	333	18.5	34.2	34.2
	ei	554	30.7	56.9	91.1
	ei osaa sanoa	87	4.8	8.9	100.0
	Total	974	54.0	100.0	

Missing	System	830	46.0		
Total		1804	100.0		

**Kysymys 50c Oliko tai onko vanhemmillanne tapana viitata jompaan kumpaan teistä esimerkkinä toiselle (Kaksosveljeenne)**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	298	16.5	31.6	31.6
	ei	558	30.9	59.2	90.9
	ei osaa sanoa	86	4.8	9.1	100.0
	Total	942	52.2	100.0	
Missing	System	862	47.8		
Total		1804	100.0		

**Kysymys 51 Jos kyllä/ Kun tällaista viittailua sattui, olitteko tyytyväinen tai tyytymätön**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	tyytyväinen	251	13.9	48.6	48.6
	yhdentekevää	80	4.4	15.5	64.1
	tyytymätön	173	9.6	33.5	97.7
	tyytyväinen	12	.7	2.3	100.0
	Total	516	28.6	100.0	
Missing	System	1288	71.4		
Total		1804	100.0		

## C. Kaksostutkimuksen sosiologiset muuttujat

### 1. Yhdessäasuminen ja tapaaminen

**Kysymys 53 Oletteko sen jälkeen asunut yhdessä kaksosveljenne kanssa**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	592	32.8	36.4	36.4
	ei	1035	57.4	63.6	100.0
	Total	1627	90.2	100.0	
Missing	System	177	9.8		
Total		1804	100.0		

**Kysymys 55a Yrittäkää muistella suurin piirtein miten usein Te olette tavannut kaksoisveljenne elämäne eri aikoina. Oletteko tavannut häntä nykyään...**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	asuu yhdessä	227	12.6	12.7	12.7
	joka päivä	225	12.5	12.6	25.3
	vähintään kerran viikossa	325	18.0	18.2	43.5
	vähintään kerran kuukaudessa	368	20.4	20.6	64.1
	vähintään kerran puolessa vuodessa	358	19.8	20.1	84.2
	vähintään kerran vuodessa	147	8.1	8.2	92.4
	harvemmin kuin kerran vuodessa	107	5.9	6.0	98.4
	ei tavannut lainkaan	28	1.6	1.6	100.0
	Total	1785	98.9	100.0	
Missing	System	19	1.1		
Total		1804	100.0		

**Kysymys 55b Yrittäkää muistella suurin piirtein miten usein Te olette tavannut kaksoisveljenne elämäne eri aikoina. Oletteko tavannut häntä Sodan jälkeen 1946-50**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	asui yhdessä	824	45.7	46.5	46.5
	joka päivä	144	8.0	8.1	54.6
	vähintään kerran viikossa	202	11.2	11.4	66.0
	vähintään kerran kuukaudessa	237	13.1	13.4	79.4
	vähintään kerran puolessa vuodessa	204	11.3	11.5	90.9
	vähintään kerran vuodessa	90	5.0	5.1	96.0



	harvemmin kuin kerran vuodessa	59	3.3	3.3	99.3
	ei tavannut lainkaan	12	.7	.7	100.0
	Total	1772	98.2	100.0	
Missing	System	32	1.8		
Total		1804	100.0		

**Kysymys 55c Yrittäkää muistella suurin piirtein miten usein Te olette tavannut kaksoisveljenne elämäne eri aikoina. Oletteko tavannut häntä Sota-aikana 1939-44**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	asui yhdessä	986	54.7	56.6	56.6
	joka päivä	116	6.4	6.7	63.3
	vähintään kerran viikossa	72	4.0	4.1	67.4
	vähintään kerran kuukaudessa	63	3.5	3.6	71.1
	vähintään kerran puolessa vuodessa	173	9.6	9.9	81.0
	vähintään kerran vuodessa	146	8.1	8.4	89.4
	harvemmin kuin kerran vuodessa	145	8.0	8.3	97.7
	ei tavannut lainkaan	40	2.2	2.3	100.0
	Total	1741	96.5	100.0	
Missing	System	63	3.5		
Total		1804	100.0		

**Kysymys 55d Yrittäkää muistella suurin piirtein miten usein Te olette tavannut kaksoisveljenne elämäne eri aikoina. Oletteko tavannut häntä ennen sotia eron jälkeen**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	asui yhdessä	1417	78.5	89.7	89.7
	joka päivä	45	2.5	2.8	92.6
	vähintään kerran viikossa	33	1.8	2.1	94.7
	vähintään kerran kuukaudessa	30	1.7	1.9	96.6
	vähintään kerran puolessa vuodessa	20	1.1	1.3	97.8
	vähintään kerran vuodessa	15	.8	.9	98.8
	harvemmin kuin kerran vuodessa	12	.7	.8	99.6

	ei tavannut lainkaan	7	.4	.4	100.0
	Total	1579	87.5	100.0	
Missing	System	225	12.5		
Total		1804	100.0		

## 2. Kouluaika

### Kysymys 56 Kävittekö kaksosveljenne kanssa samaa koulua

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	1749	97.0	97.2	97.2
	ei	51	2.8	2.8	100.0
	Total	1800	99.8	100.0	
Missing	System	4	.2		
Total		1804	100.0		

### Kysymys 58 Kuuluitteko itse kansakouluikäisenä (7-14-vuotiaana) kodin ja koulutyön ulkopuolella tiettyyn pieneen ryhmään tai porukkaan, jossa viihdyitte paremmin kuin muiden kanssa

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	1406	77.9	78.1	78.1
	ei	394	21.8	21.9	100.0
	Total	1800	99.8	100.0	
Missing	System	4	.2		
Total		1804	100.0		

### Kysymys 60 Oliko kaksosveljenne mukana tässä seurassa

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	1417	78.5	86.0	86.0
	oli joskus mukana	152	8.4	9.2	95.2
	ei	79	4.4	4.8	100.0
	Total	1648	91.4	100.0	
Missing	System	156	8.6		

Total	1804	100.0		
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**Kysymys 61 Jos oli / Oliko jompikumpi Teistä sellaisessa asemassa, että häntä olisi voitu sanoa tämän porukan johtajaksi**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	haastateltava	111	6.2	7.2	7.2
	kaksosveli	128	7.1	8.2	15.4
	ei kumpikaan	1303	72.2	84.0	99.4
	haastateltava/kaksosveli	10	.6	.6	100.0
	Total	1552	86.0	100.0	
Missing	System	252	14.0		
Total		1804	100.0		

**Kysymys 62 Jos oli / Oliko porukan suhtautumisessa Teihin siinä mielessä eroa, että toisesta teistä pidettiin enemmän**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	haastateltavasta	109	6.0	7.3	7.3
	kaksosveljestä	103	5.7	6.9	14.3
	ei eroja	1271	70.5	85.7	100.0
	Total	1483	82.2	100.0	
Missing	System	321	17.8		
Total		1804	100.0		

**Kysymys 63 Oliko porukka yleensä hyvissä vai huonoissa kirjoissa opettajien keskuudessa**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	erittäin hyvissä kirjoissa	57	3.2	3.5	3.5
	hyvissä kirjoissa	1297	71.9	79.7	83.2
	ei voi sanoa	107	5.9	6.6	89.7
	huonoissa kirjoissa	160	8.9	9.8	99.6
	erittäin huonoissa kirjoissa	5	.3	.3	99.9
	24	2	.1	.1	100.0
	Total	1628	90.2	100.0	
Missing	System	176	9.8		

Total	1804	100.0		
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**Kysymys 65 Oliko porukka yleensä varttuneiden ihmisten kanssa riidassa vai sovussa**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	riidassa	57	3.2	3.5	3.5
	sovussa	1564	86.7	94.8	98.2
	ei osaa sanoa	28	1.6	1.7	99.9
	12	1	.1	.1	100.0
	Total	1650	91.5	100.0	
Missing	System	154	8.5		
Total		1804	100.0		

**Kysymys 66 Tiedättökö kenenkään porukan jäsenistä käyttäneen väkijuomia kansakouluikäisenä**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	45	2.5	2.7	2.7
	ei	1601	88.7	96.9	99.6
	ei voi sanoa	6	.3	.4	100.0
	Total	1652	91.6	100.0	
Missing	System	152	8.4		
Total		1804	100.0		

**Kysymys 67a Seurustelitteko jonkun tytön kanssa alle 15-vuotiaana**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	189	10.5	10.6	10.6
	ei	1595	88.4	89.1	99.6
	ei osaa sanoa	7	.4	.4	100.0
	Total	1791	99.3	100.0	
Missing	System	13	.7		
Total		1804	100.0		

**Kysymys 67b Seurustelitteko jonkun tytön kanssa alle 18-vuotiaana**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	1056	58.5	58.6	58.6

	ei	735	40.7	40.8	99.4
	ei osaa sanoa	11	.6	.6	100.0
	Total	1802	99.9	100.0	
Missing	System	2	.1		
Total		1804	100.0		

**Kysymys 68a Jos kyllä / Minkälaatuista oli tämä seurustelu alle 15-vuotiaana**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	vain toverillista	168	9.3	81.6	81.6
	suutelite	28	1.6	13.6	95.1
	sukupuoliyhteyttä	9	.5	4.4	99.5
	123	1	.1	.5	100.0
	Total	206	11.4	100.0	
Missing	System	1598	88.6		
Total		1804	100.0		

**Kysymys 68b Jos kyllä / Minkälaatuista oli tämä seurustelu alle 18-vuotiaana**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	vain toverillista	619	34.3	58.5	58.5
	suutelite	300	16.6	28.3	86.8
	sukupuoliyhteyttä	136	7.5	12.8	99.6
	suutelite/sukupuoliyhteyttä	3	.2	.3	99.9
	123	1	.1	.1	100.0
	Total	1059	58.7	100.0	
Missing	System	745	41.3		
Total		1804	100.0		

**Kysymys 70 Kun Teillä kansakouluiässä oli henkilökohtaisia vaikeuksia, kenen kanssa lähinnä keskustelitte niistä**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	isän kanssa	160	8.9	9.0	9.0
	äidin kanssa	669	37.1	37.8	46.8
	kaksoveljen kanssa	688	38.1	38.8	85.7
	muun perhepiiriin kuuluvan tai sukulaisen kanssa	121	6.7	6.8	92.5
	jonkun muun kanssa / kenen	79	4.4	4.5	97.0
	Is	44	2.4	2.5	99.4
	Is	3	.2	.2	99.6
	23	6	.3	.3	99.9
	123	1	.1	.1	100.0
	Total	1771	98.2	100.0	
Missing	System	33	1.8		
Total		1804	100.0		

**Kysymys 71 Jollei 3/70 Olivatko henkilökohtaiset vaikeutenne keskustelun aiheena myös kaksoveljenne kanssa**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	439	24.3	39.7	39.7
	jokkus	461	25.6	41.6	81.3
	ei yleensä	127	7.0	11.5	92.8
	ei koskaan	80	4.4	7.2	100.0
	Total	1107	61.4	100.0	
Missing	System	697	38.6		
Total		1804	100.0		

**Kysymys 72 Kun jouduitte riitaan kansakouluiässä kaksosveljenne  
läsnä ollessa olitteko Te yleensä samalla vai eri puolella**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	aina samalla	1170	64.9	65.2	65.2
	yleensä samalla	507	28.1	28.3	93.5
	ei voi sanoa	85	4.7	4.7	98.2
	yleensä eri	30	1.7	1.7	99.9
	aina eri	2	.1	.1	100.0
	Total	1794	99.4	100.0	
Missing	System	10	.6		
Total		1804	100.0		

### 3. asevelvollisuus

**Kysymys 73 Oletteko ollut armeijassa**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	1698	94.1	94.2	94.2
	ei	105	5.8	5.8	100.0
	Total	1803	99.9	100.0	
Missing	System	1	.1		
Total		1804	100.0		

**Kysymys 75a Pyrittekö kaksosveljenne kanssa samaan joukko-  
osastoon**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	583	32.3	34.6	34.6
	ei	1102	61.1	65.4	100.0
	Total	1685	93.4	100.0	
Missing	System	119	6.6		
Total		1804	100.0		

### Kysymys 76 Olitteko samassa joukko-osastossa kaksoveljenne kanssa

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä, kokoajan	359	19.9	21.8	21.8
	kyllä, suurimman osan ajasta	215	11.9	13.0	34.8
	kyllä, lyhyen ajan	292	16.2	17.7	52.5
	ei lainkaan samassa	783	43.4	47.5	100.0
	Total	1649	91.4	100.0	
Missing	System	155	8.6		
Total		1804	100.0		

### Kysymys 77 Jos 1-3/76 Oliko kaksoveljellänne ja Teillä yleensä samoja kavereita

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	474	26.3	55.0	55.0
	kyllä osaksi	274	15.2	31.8	86.8
	ei	114	6.3	13.2	100.0
	Total	862	47.8	100.0	
Missing	System	942	52.2		
Total		1804	100.0		

### Kysymys 78 Jos kyllä / Oliko jompikumpi Teistä sellaisessa asemassa, että häntä olisi voitu kutsua näitten kavereitten henkiseksi johtajaksi

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	haastateltava	35	1.9	4.6	4.6
	kaksoveli	46	2.5	6.0	10.5
	ei kumpikaan	686	38.0	89.2	99.7
	haastateltava/kaksoveli	2	.1	.3	100.0
	Total	769	42.6	100.0	
Missing	System	1035	57.4		
Total		1804	100.0		



**Kysymys 79 Jos kyllä / Pidettiinkö kavereitten keskuudessa teistä jommastakummasta enemmän**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	haastateltavasta	28	1.6	3.8	3.8
	kaksoveljestä	32	1.8	4.4	8.2
	ei eroja	668	37.0	91.8	100.0
	Total	728	40.4	100.0	
Missing	System	1076	59.6		
Total		1804	100.0		

**Kysymys 80 Olitteko melko pitkiä aikoja porukoissa, joissa ryypättiin**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	erittäin paljon	21	1.2	1.3	1.3
	paljon	246	13.6	15.3	16.6
	ei	1315	72.9	81.6	98.1
	ei osaa sanoa	30	1.7	1.9	100.0
	Total	1612	89.4	100.0	
Missing	System	192	10.6		
Total		1804	100.0		

## 4. Työolot

**Kysymys 82 Oletteko joskus samanaikaisesti ollut kaksoveljenne kanssa samassa työpaikassa**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	1414	78.4	78.6	78.6
	ei	385	21.3	21.4	100.0
	Total	1799	99.7	100.0	
Missing	System	5	.3		
Total		1804	100.0		

**Kysymys 86 Kumpi oli työssä johtavampi**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	haastateltava	289	16.0	20.8	20.8
	kaksoveli	275	15.2	19.8	40.6
	ei osaa sanoa	818	45.3	58.9	99.5
	ei eroja	5	.3	.4	99.9

	12	1	.1	.1	99.9
	13	1	.1	.1	100.0
	Total	1389	77.0	100.0	
Missing	System	415	23.0		
Total		1804	100.0		

#### Kysymys 94a ryypättiinkö pitkäaikaisimmalla työpaikalla työaikana

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	usein	41	2.3	2.8	2.8
	joskus	127	7.0	8.7	11.5
	harvoin	223	12.4	15.2	26.7
	ei koskaan	1060	58.8	72.5	99.2
	ei osaa sanoa	12	.7	.8	100.0
	Total	1463	81.1	100.0	
Missing	System	341	18.9		
Total		1804	100.0		

#### Kysymys 94b Ryypätäänkö nykyisellä työpaikalla työaikana

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	usein	24	1.3	1.5	1.5
	joskus	87	4.8	5.4	6.9
	harvoin	186	10.3	11.5	18.4
	ei koskaan	1303	72.2	80.6	98.9
	ei osaa sanoa	17	.9	1.1	100.0
	Total	1617	89.6	100.0	
Missing	System	187	10.4		
Total		1804	100.0		

#### Kysymys 95a Kun vertaatte pitkäaikaisinta työpaikkaa muihin oliko se...

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	huomattavasti enemmän viinaan menevä	26	1.4	1.8	1.8
	enemmän viinaan menevä	95	5.3	6.6	8.4
	samanlainen kun muut	112	6.2	7.7	16.1
	vähemmän viinaan menevä	157	8.7	10.8	26.9
	huomattavasti vähemmän viinaan menevä	138	7.6	9.5	36.4

	miltei täysraitis	886	49.1	61.1	97.6
	ei osaa sanoa	35	1.9	2.4	100.0
	Total	1449	80.3	100.0	
Missing	System	355	19.7		
Total		1804	100.0		

### Kysymys 95b Kun vertaatte nykyistä työpaikkaa muihin onko se...

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	huomattavasti enemmän viinaan menevä	16	.9	1.0	1.0
	enemmän viinaan menevä	59	3.3	3.7	4.7
	samanlainen kun muut	111	6.2	7.0	11.7
	vähemmän viinaan menevä	126	7.0	7.9	19.6
	huomattavasti vähemmän viinaan menevä	146	8.1	9.2	28.7
	miltei täysraitis	1083	60.0	67.9	96.7
	ei osaa sanoa	53	2.9	3.3	100.0
	Total	1594	88.4	100.0	
Missing	System	210	11.6		
Total		1804	100.0		

## 5. Oma perhe

### Kysymys 96a Milloin menitte naimisiin 1. kerran

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1940	1	.1	.1	.1
	1941	5	.3	.4	.5
	1942	4	.2	.3	.8
	1943	17	.9	1.3	2.0
	1944	20	1.1	1.5	3.5
	1945	52	2.9	3.9	7.4
	1946	113	6.3	8.5	15.9
	1947	111	6.2	8.3	24.2
	1948	112	6.2	8.4	32.6
	1949	116	6.4	8.7	41.3
	1950	125	6.9	9.4	50.7
	1951	138	7.6	10.4	61.1
	1952	112	6.2	8.4	69.5
	1953	124	6.9	9.3	78.8

	1954	88	4.9	6.6	85.4
	1955	88	4.9	6.6	92.0
	1956	63	3.5	4.7	96.7
	1957	42	2.3	3.2	99.8
	1958	2	.1	.2	100.0
	Total	1333	73.9	100.0	
Missing	System	471	26.1		
Total		1804	100.0		

### Kysymys 96b Milloin menitte naimisiin 2. kerran

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1948	1	.1	4.0	4.0
	1950	1	.1	4.0	8.0
	1951	4	.2	16.0	24.0
	1952	3	.2	12.0	36.0
	1953	5	.3	20.0	56.0
	1954	1	.1	4.0	60.0
	1955	2	.1	8.0	68.0
	1956	1	.1	4.0	72.0
	1957	4	.2	16.0	88.0
	1958	3	.2	12.0	100.0
	Total	25	1.4	100.0	
Missing	System	1779	98.6		
Total		1804	100.0		

### Kysymys 97 Minkä ikäinen vaimonne on

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	17	1	.1	.1	.1
	19	7	.4	.5	.6
	20	7	.4	.5	1.1
	21	13	.7	1.0	2.1
	22	26	1.4	2.0	4.1
	23	29	1.6	2.2	6.2
	24	53	2.9	4.0	10.2
	25	66	3.7	5.0	15.2
	26	58	3.2	4.4	19.5
	27	91	5.0	6.8	26.4
	28	101	5.6	7.6	34.0
	29	124	6.9	9.3	43.3

	30	131	7.3	9.8	53.1
	31	94	5.2	7.1	60.2
	32	97	5.4	7.3	67.5
	33	90	5.0	6.8	74.2
	34	90	5.0	6.8	81.0
	35	78	4.3	5.9	86.9
	36	44	2.4	3.3	90.2
	37	35	1.9	2.6	92.8
	38	20	1.1	1.5	94.3
	39	12	.7	.9	95.2
	40	18	1.0	1.4	96.5
	41	7	.4	.5	97.1
	42	15	.8	1.1	98.2
	43	4	.2	.3	98.5
	44	7	.4	.5	99.0
	45	1	.1	.1	99.1
	46	3	.2	.2	99.3
	47	3	.2	.2	99.5
	48	2	.1	.2	99.7
	49	1	.1	.1	99.8
	50	3	.2	.2	100.0
	Total	1331	73.8	100.0	
Missing	System	473	26.2		
Total		1804	100.0		

### Kysymys 98 Montako lasta Teillä on

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	169	9.4	12.7	12.7
	1	384	21.3	28.8	41.5
	2	373	20.7	28.0	69.5
	3	228	12.6	17.1	86.6
	4	103	5.7	7.7	94.3
	5	45	2.5	3.4	97.7
	6	22	1.2	1.7	99.3
	7	6	.3	.5	99.8
	8	2	.1	.2	99.9
	10	1	.1	.1	100.0
	Total	1333	73.9	100.0	
Missing	System	471	26.1		
Total		1804	100.0		

**Kysymys 99 Jos on / Milloin ensimmäine lapsenne on syntynyt**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1941	2	.1	.2	.2
	1942	3	.2	.3	.4
	1943	10	.6	.9	1.3
	1944	9	.5	.8	2.1
	1945	32	1.8	2.8	4.8
	1946	71	3.9	6.1	10.9
	1947	89	4.9	7.7	18.6
	1948	94	5.2	8.1	26.7
	1949	101	5.6	8.7	35.4
	1950	102	5.7	8.8	44.2
	1951	111	6.2	9.6	53.8
	1952	106	5.9	9.1	62.9
	1953	98	5.4	8.4	71.4
	1954	106	5.9	9.1	80.5
	1955	87	4.8	7.5	88.0
	1956	67	3.7	5.8	93.8
	1957	64	3.5	5.5	99.3
	1958	8	.4	.7	100.0
	Total	1160	64.3	100.0	
Missing	System	644	35.7		
Total		1804	100.0		

**Kysymys 100 Jos on / Milloin nuorin lapsenne on syntynyt**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1944	1	.1	.1	.1
	1946	2	.1	.3	.4
	1947	5	.3	.6	1.0
	1948	9	.5	1.2	2.2
	1949	13	.7	1.7	3.9
	1950	20	1.1	2.6	6.5
	1951	35	1.9	4.5	11.0
	1952	53	2.9	6.9	17.9
	1953	64	3.5	8.3	26.2
	1954	83	4.6	10.8	36.9
	1955	109	6.0	14.1	51.0
	1956	161	8.9	20.9	71.9

	1957	196	10.9	25.4	97.3
	1958	21	1.2	2.7	100.0
	Total	772	42.8	100.0	
Missing	System	1032	57.2		
Total		1804	100.0		

### Kysymys 101a Käykö vaimonne kirkossa tai hartaustilaisuuksissa

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	usein	119	6.6	8.9	8.9
	joskus	483	26.8	36.3	45.3
	harvoin	569	31.5	42.8	88.0
	ei koskaan	159	8.8	12.0	100.0
	Total	1330	73.7	100.0	
Missing	System	474	26.3		
Total		1804	100.0		

### Kysymys 102 Onko vaimonne ansiotyössä

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	399	22.1	30.0	30.0
	ei	930	51.6	70.0	100.0
	Total	1329	73.7	100.0	
Missing	System	475	26.3		
Total		1804	100.0		

### Kysymys 105 Käyttääkö vaimonne alkoholijuomia

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	33	1.8	2.5	2.5
	ei yleensä	320	17.7	24.2	26.6
	ei lainkaan	972	53.9	73.4	100.0
	Total	1325	73.4	100.0	
Missing	System	479	26.6		
Total		1804	100.0		

**Kysymys 106 Ovatko mielestänne vaimonne ja kaksosveljenne vaimon luonteenpiirteet**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	hyvin samankaltaiset	15	.8	1.4	1.4
	samankaltaiset	175	9.7	15.9	17.2
	erilaiset	546	30.3	49.5	66.7
	hyvin erilaiset	265	14.7	24.0	90.7
	ei voi sanoa	102	5.7	9.2	99.9
	23	1	.1	.1	100.0
	Total	1104	61.2	100.0	
Missing	System	700	38.8		
Total		1804	100.0		

## 6. Ystävät

**Kysymys 108 Onko Teillä perheen ulkopuolella muutama henkilö (tai joku yksityinen henkilö), joita voitte sanoa parhaiksi ystäviksenne**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	on parhaiden ystävien ryhmä	798	44.2	44.6	44.6
	on yksi paras ystävä	263	14.6	14.7	59.3
	ei ole kumpaakaan (jos 3/108 siirtykää kys. 115)	727	40.3	40.7	100.0
	Total	1788	99.1	100.0	
Missing	System	16	.9		
Total		1804	100.0		

**Kysymys109 Tunteeko tämä ryhmä tai henkilö kaksosveljenne**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	erittäin hyvin	291	16.1	27.4	27.4



	hyvin	348	19.3	32.8	60.2
	jonkin verran	267	14.8	25.1	85.3
	ei lainkaan	156	8.6	14.7	100.0
	Total	1062	58.9	100.0	
Missing	System	742	41.1		
Total		1804	100.0		

**Kysymys 111 Kuuluvatko ryhmän jäsenet (ystävä) tiettyyn järjestöön tai yhdistykseen**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	519	28.8	49.3	49.3
	ei	533	29.5	50.7	100.0
	Total	1052	58.3	100.0	
Missing	System	752	41.7		
Total		1804	100.0		

**Kysymys 114 Onko mielestänne ryhmä (ystävä) verrattuna muihin vastaaviin ryhmiin (ystäviin)...**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	huomattavasti enemmän viinaan menevä	11	.6	1.1	1.1
	enemmän viinaan menevä	51	2.8	5.0	6.0
	ei eroja	57	3.2	5.5	11.6
	vähemmän viinaan menevä	332	18.4	32.3	43.9
	huomattavasti vähemmän viinaan menevä	204	11.3	19.8	63.7
	miltei täysraitis	358	19.8	34.8	98.5
	ei osaa sanoa	15	.8	1.5	100.0
	Total	1028	57.0	100.0	
Missing	System	776	43.0		
Total		1804	100.0		

## D. Juominen

**Kysymys 126a Miten kauan juomista kesti viime kerralla kun joitte alkoholijuomia (tunti/min)**

	Frequency	Percent	Valid Percent	Cumulative Percent
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Valid	.00	1	.1	.1	.1
	.01	1	.1	.1	.1
	.02	1	.1	.1	.2
	.03	1	.1	.1	.2
	.05	22	1.2	1.3	1.6
	.10	31	1.7	1.9	3.5
	.15	27	1.5	1.6	5.1
	.20	8	.4	.5	5.6
	.30	77	4.3	4.7	10.3
	.40	1	.1	.1	10.4
	.45	2	.1	.1	10.5
	1.00	175	9.7	10.7	21.2
	1.30	35	1.9	2.1	23.3
	2.00	267	14.8	16.3	39.6
	2.30	34	1.9	2.1	41.7
	3.00	210	11.6	12.8	54.5
	3.30	30	1.7	1.8	56.3
	3.50	1	.1	.1	56.4
	4.00	245	13.6	15.0	71.4
	4.30	37	2.1	2.3	73.6
	5.00	145	8.0	8.9	82.5
	5.30	11	.6	.7	83.2
	6.00	112	6.2	6.8	90.0
	6.30	3	.2	.2	90.2
	7.00	29	1.6	1.8	91.9
	7.30	3	.2	.2	92.1
	8.00	32	1.8	2.0	94.1
	8.30	1	.1	.1	94.1
	9.00	15	.8	.9	95.1
	10.00	20	1.1	1.2	96.3
	11.00	1	.1	.1	96.3
	12.00	33	1.8	2.0	98.4
	13.00	1	.1	.1	98.4
	15.30	1	.1	.1	98.5
	18.00	4	.2	.2	98.7
	21.00	1	.1	.1	98.8
	24.00	12	.7	.7	99.5
	30.00	1	.1	.1	99.6
	36.00	2	.1	.1	99.7
	72.00	1	.1	.1	99.8

	84.00	3	.2	.2	99.9
	96.00	1	.1	.1	100.0
	Total	1638	90.8	100.0	
Missing	System	166	9.2		
Total		1804	100.0		

**Kysymys 126b Miten kauan juomista kesti viime kertaa  
edeltäneellä kerralla (tunti/min)**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.01	2	.1	.1	.1
	.03	1	.1	.1	.2
	.05	7	.4	.5	.7
	.10	18	1.0	1.2	1.8
	.15	14	.8	.9	2.8
	.20	4	.2	.3	3.0
	.30	42	2.3	2.8	5.8
	.40	1	.1	.1	5.8
	1.00	140	7.8	9.2	15.0
	1.20	1	.1	.1	15.1
	1.30	28	1.6	1.8	16.9
	2.00	203	11.3	13.3	30.2
	2.30	32	1.8	2.1	32.3
	3.00	206	11.4	13.5	45.8
	3.30	34	1.9	2.2	48.0
	3.50	1	.1	.1	48.1
	4.00	222	12.3	14.5	62.6
	4.30	37	2.1	2.4	65.0
	4.50	1	.1	.1	65.1
	5.00	166	9.2	10.9	76.0
	5.30	12	.7	.8	76.8
	6.00	154	8.5	10.1	86.8
	6.30	4	.2	.3	87.1
	7.00	45	2.5	2.9	90.0
	7.30	1	.1	.1	90.1
	7.50	1	.1	.1	90.2
	8.00	43	2.4	2.8	93.0
	9.00	11	.6	.7	93.7
	10.00	29	1.6	1.9	95.6
	11.00	5	.3	.3	95.9
	12.00	31	1.7	2.0	98.0

	13.00	2	.1	.1	98.1
	15.00	2	.1	.1	98.2
	17.00	1	.1	.1	98.3
	18.00	3	.2	.2	98.5
	21.00	4	.2	.3	98.8
	24.00	13	.7	.9	99.6
	48.00	3	.2	.2	99.8
	60.00	1	.1	.1	99.9
	72.00	1	.1	.1	99.9
	96.00	1	.1	.1	100.0
	Total	1527	84.6	100.0	
Missing	System	277	15.4		
Total		1804	100.0		

### Kysymys 127a humailuitteko viime kerralla kun joitte alkoholijuomia

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ei lainkaan	678	37.6	41.7	41.7
	jonkin verran	753	41.7	46.3	88.0
	melkoisesti	174	9.6	10.7	98.6
	muisti meni	10	.6	.6	99.3
	sammuin	12	.7	.7	100.0
	Total	1627	90.2	100.0	
Missing	System	177	9.8		
Total		1804	100.0		

### Kysymys 127b humailuitteko viime kertaa edeltäneellä kerralla

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ei lainkaan	556	30.8	36.7	36.7
	jonkin verran	697	38.6	46.1	82.8
	melkoisesti	221	12.3	14.6	97.4
	muisti meni	23	1.3	1.5	98.9
	sammuin	16	.9	1.1	100.0
	Total	1513	83.9	100.0	
Missing	System	291	16.1		
Total		1804	100.0		

**Kysymys 128a Seura oli: tovereita, naapureita**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	528	29.3	100.0	100.0
Missing	System	1276	70.7		
Total		1804	100.0		

**Kysymys 128b Seura oli: työkavereita, liikeystäviä**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	371	20.6	100.0	100.0
Missing	System	1433	79.4		
Total		1804	100.0		

**Kysymys 128c Seura oli: kotiväkeä, lähisukulaisia**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	402	22.3	100.0	100.0
Missing	System	1402	77.7		
Total		1804	100.0		

**Kysymys 128d Seura oli: talkooväkeä**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	13	.7	100.0	100.0
Missing	System	1791	99.3		
Total		1804	100.0		

**Kysymys 128e Seura oli: perhe-, vierailu ym. tuttavlia**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	171	9.5	100.0	100.0
Missing	System	1633	90.5		
Total		1804	100.0		

**Kysymys 128f Seura oli: juhlaväkeä**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	55	3.0	100.0	100.0
Missing	System	1749	97.0		
Total		1804	100.0		

### Kysymys 128g Seura oli: ennestään tuntemattomia

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	16	.9	100.0	100.0
Missing	System	1788	99.1		
Total		1804	100.0		

### Kysymys 128h seura oli: ei ollut seuraa

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	157	8.7	100.0	100.0
Missing	System	1647	91.3		
Total		1804	100.0		

### Kysymys 129a Paikka: hvan tai tarjoojan työpaikka

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	49	2.7	100.0	100.0
Missing	System	1755	97.3		
Total		1804	100.0		

### Kysymys 129b Paikka: sauna

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	26	1.4	100.0	100.0
Missing	System	1778	98.6		
Total		1804	100.0		

### Kysymys 129c Paikka: kahvila

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	20	1.1	100.0	100.0
Missing	System	1784	98.9		

Total		1804	100.0		
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### Kysymys 129d Paikka: tanssipaiikka

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	59	3.3	100.0	100.0
Missing	System	1745	96.7		
Total		1804	100.0		

### Kysymys 129e Paikka: anniskeluravintola

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	329	18.2	100.0	100.0
Missing	System	1475	81.8		
Total		1804	100.0		

### Kysymys 129f Paikka: hvan koti tai asunto

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	545	30.2	100.0	100.0
Missing	System	1259	69.8		
Total		1804	100.0		

### Kysymys 129g Paikka: toisen koti tai asunto

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	519	28.8	100.0	100.0
Missing	System	1285	71.2		
Total		1804	100.0		

### Kysymys 129h Paikka: jokin muu

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	177	9.8	100.0	100.0
Missing	System	1627	90.2		
Total		1804	100.0		

### Kysymys 130 seurassa oli...

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yksin	145	8.0	8.9	8.9
	miehiä	1017	56.4	62.2	71.1
	naisia	13	.7	.8	71.9
	miehiä	459	25.4	28.1	100.0
	Total	1634	90.6	100.0	
Missing	System	170	9.4		
Total		1804	100.0		

**Kysymys 131 Paljonko viimekertainen alkoholijuomien  
nauttiminen maksoi Teille (Mk)**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	736	40.8	45.2	45.2
	2	1	.1	.1	45.2
	25	1	.1	.1	45.3
	30	1	.1	.1	45.3
	40	3	.2	.2	45.5
	50	10	.6	.6	46.1
	52	1	.1	.1	46.2
	55	2	.1	.1	46.3
	60	1	.1	.1	46.4
	65	1	.1	.1	46.4
	70	3	.2	.2	46.6
	75	2	.1	.1	46.7
	80	3	.2	.2	46.9
	81	1	.1	.1	47.0
	100	15	.8	.9	47.9
	105	1	.1	.1	48.0
	110	4	.2	.2	48.2
	116	1	.1	.1	48.3
	120	7	.4	.4	48.7
	140	1	.1	.1	48.8
	150	14	.8	.9	49.6
	153	1	.1	.1	49.7
	160	1	.1	.1	49.8
	165	4	.2	.2	50.0
	174	1	.1	.1	50.1
	180	3	.2	.2	50.2
	200	37	2.1	2.3	52.5



203	1	.1	.1	52.6
225	1	.1	.1	52.6
228	1	.1	.1	52.7
240	1	.1	.1	52.8
250	10	.6	.6	53.4
300	51	2.8	3.1	56.5
309	1	.1	.1	56.6
320	1	.1	.1	56.6
350	13	.7	.8	57.4
360	1	.1	.1	57.5
370	1	.1	.1	57.5
375	8	.4	.5	58.0
380	3	.2	.2	58.2
390	1	.1	.1	58.3
400	28	1.6	1.7	60.0
410	1	.1	.1	60.1
425	1	.1	.1	60.1
440	1	.1	.1	60.2
450	12	.7	.7	60.9
480	1	.1	.1	61.0
500	49	2.7	3.0	64.0
520	1	.1	.1	64.0
550	9	.5	.6	64.6
560	1	.1	.1	64.7
600	104	5.8	6.4	71.0
610	1	.1	.1	71.1
620	4	.2	.2	71.3
650	8	.4	.5	71.8
660	1	.1	.1	71.9
700	41	2.3	2.5	74.4
720	1	.1	.1	74.5
740	1	.1	.1	74.5
750	62	3.4	3.8	78.3
800	29	1.6	1.8	80.1
810	1	.1	.1	80.2
840	2	.1	.1	80.3
850	8	.4	.5	80.8
900	36	2.0	2.2	83.0
1000	66	3.7	4.0	87.1
1100	5	.3	.3	87.4

1200	27	1.5	1.7	89.0
1300	2	.1	.1	89.1
1350	2	.1	.1	89.3
1360	1	.1	.1	89.3
1390	1	.1	.1	89.4
1400	9	.5	.6	89.9
1500	34	1.9	2.1	92.0
1510	1	.1	.1	92.1
1600	7	.4	.4	92.5
1650	1	.1	.1	92.6
1700	4	.2	.2	92.8
1750	6	.3	.4	93.2
1800	6	.3	.4	93.6
1850	1	.1	.1	93.6
1950	2	.1	.1	93.7
2000	29	1.6	1.8	95.5
2100	1	.1	.1	95.6
2350	1	.1	.1	95.6
2400	2	.1	.1	95.8
2500	8	.4	.5	96.3
2550	1	.1	.1	96.3
2600	2	.1	.1	96.4
2700	1	.1	.1	96.5
2800	2	.1	.1	96.6
3000	18	1.0	1.1	97.7
3100	1	.1	.1	97.8
3200	3	.2	.2	98.0
3400	1	.1	.1	98.0
3500	5	.3	.3	98.3
4000	6	.3	.4	98.7
4500	2	.1	.1	98.8
4800	1	.1	.1	98.9
5000	5	.3	.3	99.2
5500	1	.1	.1	99.3
6000	3	.2	.2	99.4
6250	1	.1	.1	99.5
8000	1	.1	.1	99.6
10000	2	.1	.1	99.7
12000	1	.1	.1	99.8
19500	1	.1	.1	99.8

	40000	1	.1	.1	99.9
	50000	1	.1	.1	99.9
	60000	1	.1	.1	100.0
	Total	1630	90.4	100.0	
Missing	System	174	9.6		
Total		1804	100.0		

### Kysymys 132 Jos maksoi / Tuliko se mielestänne...

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	erittäin halvaksi	166	9.2	17.8	17.8
	melko halvaksi	436	24.2	46.9	64.7
	melko kalliiksi	261	14.5	28.1	92.8
	erittäin kalliiksi	67	3.7	7.2	100.0
	Total	930	51.6	100.0	
Missing	System	874	48.4		
Total		1804	100.0		

### Kysymys 133 Oliko viimekertaisesta alkoholijuomien nauttimisesta krapula

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	erittäin kova	29	1.6	1.8	1.8
	melkoinen	33	1.8	2.0	3.8
	tavallinen	60	3.3	3.6	7.4
	jonkin verran tuntui	215	11.9	13.0	20.4
	ei lainkaan krapulaa (jollei lainkaan krapulaa, siirtykää kysymykseen 123b)	1315	72.9	79.6	100.0
	Total	1652	91.6	100.0	
Missing	System	152	8.4		
Total		1804	100.0		

### Kysymys 135 Krapularyyppyjä:

	Frequency	Percent	Valid Percent	Cumulative Percent
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Valid	kyllä	39	2.2	5.5	5.5
	ei	667	37.0	94.5	100.0
	Total	706	39.1	100.0	
Missing	System	1098	60.9		
Total		1804	100.0		

### Kysymys 136-1 Krapulaoireet: päänsärkyä

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	247	13.7	100.0	100.0
Missing	System	1557	86.3		
Total		1804	100.0		

### Kysymys 136-2 Krapulaoireet: pahoinvointia

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	144	8.0	100.0	100.0
Missing	System	1660	92.0		
Total		1804	100.0		

### Kysymys 136-3 Krapulaoireet: vatsavaivoja, minkälaisia...

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	49	2.7	100.0	100.0
Missing	System	1755	97.3		
Total		1804	100.0		

### Kysymys 136-4 Krapulaoireet: ruokahaluttomuutta

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	100	5.5	100.0	100.0
Missing	System	1704	94.5		
Total		1804	100.0		

### Kysymys 136-5 Krapulaoireet: vapinaa

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	59	3.3	100.0	100.0
Missing	System	1745	96.7		
Total		1804	100.0		

**Kysymys 136-6 Krapulaoireet: sydänvaivoja**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	23	1.3	100.0	100.0
Missing	System	1781	98.7		
Total		1804	100.0		

**Kysymys 136-7 Krapulaoireet: epämääräistä pelkoa**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	13	.7	100.0	100.0
Missing	System	1791	99.3		
Total		1804	100.0		

**Kysymys 136-8 Krapulaoireet: itsemurha-ajatuksia**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	2	.1	100.0	100.0
Missing	System	1802	99.9		
Total		1804	100.0		

**Kysymys 137a Useimmilla meistä on jokseenkin vakiintunut tapamme nauttia alkoholia. Mihin alla mainituista ryhmistä katsoisitte lähinnä kuuluvanne. Niihin, jotka nauttivat...**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	päivittäin	1	.1	.1	.1
	kerran viikossa	145	8.0	8.8	8.9
	kerran kuukaudessa	556	30.8	33.7	42.6
	kerran puolessa vuodessa	577	32.0	35.0	77.6
	kerran vuodessa	166	9.2	10.1	87.6
	harvemmin kuin kerran vuodessa	189	10.5	11.5	99.1
	ei osaa sanoa	15	.8	.9	100.0
	Total	1649	91.4	100.0	
Missing	System	155	8.6		
Total		1804	100.0		

**Kysymys 137b Useimmilla meistä on jokseenkin vakiintunut tapamme nauttia alkoholia. Mihin alla mainituista ryhmistä katsoisitte kaksosveljenne lähinnä kuuluvan. Niihin, jotka nauttivat...**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	päivittäin	7	.4	.4	.4
	kerran viikossa	163	9.0	10.0	10.4
	kerran kuukaudessa	494	27.4	30.2	40.6
	kerran puolessa vuodessa	462	25.6	28.2	68.8
	kerran vuodessa	167	9.3	10.2	79.0
	harvemmin kuin kerran vuodessa	166	9.2	10.1	89.1
	ei osaa sanoa	178	9.9	10.9	100.0
	Total	1637	90.7	100.0	
Missing	System	167	9.3		
Total		1804	100.0		

**Kysymys 138a Tavallisesti juomisessa menee kerrallaan aikaa...**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	vähemmän kuin 1 päivä	1508	83.6	91.8	91.8
	1 päivä	97	5.4	5.9	97.7
	2-3 päivää	27	1.5	1.6	99.4
	enemmän kuin viikko	1	.1	.1	99.5
	ei osaa sanoa	9	.5	.5	100.0
	Total	1642	91.0	100.0	
Missing	System	162	9.0		
Total		1804	100.0		

**Kysymys 138b Tavallisesti kaksoveljellänne juomisessa menee kerrallaan aikaa...**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	vähemmän kuin 1 päivä	1369	75.9	84.2	84.2
	1 päivä	104	5.8	6.4	90.6
	2-3 päivää	47	2.6	2.9	93.5
	4-7 päivää	7	.4	.4	94.0
	ei osaa sanoa	98	5.4	6.0	100.0
	Total	1625	90.1	100.0	
Missing	System	179	9.9		
Total		1804	100.0		

### Kysymys 139a Tavallisesti tulee juotua...

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	hyvin vähän (väkeviä juomia: 1 ryyppy eli ei yli 10cl, viiniä: ei yli 20cl, olutta: puolesta pullosta kahteen pulloon eli ei yli 80cl.)	316	17.5	19.2	19.2
	vähän (väkeviä juomia: pari ryyppyä eli 10-20cl, viiniä: 20-40cl, olutta: 3-4 pulloa eli 80-160cl.)	589	32.6	35.7	54.9
	kohtalaisesti (väkeviä juomia: puoli pulloa eli 20-40cl, viiniä: 1 pullo eli 40-80cl, olutta: 5-9 pulloa eli 160-320cl.)	619	34.3	37.5	92.4
	paljon (väkeviä juomia: 1 pullo eli 40-80cl, viiniä: 1-2 pulloa eli 80-16cl, olutta: 10-15 pulloa eli 320-500cl.)	100	5.5	6.1	98.5
	erittäin paljon (väkeviä juomia: ainakin 2 pulloa eli yli 80cl, viiniä: ainakin 3 pulloa eli yli 160cl, olutta: yli 15 pulloa eli yli 500cl.)	17	.9	1.0	99.5
	ei osaa sanoa	8	.4	.5	100.0
	Total	1649	91.4	100.0	
Missing	System	155	8.6		
Total		1804	100.0		

**Kysymys 139b Kaksosveljenne tavallisesti juo...**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	hyvin vähän (väkeviä juomia: 1 ryyppy eli ei yli 10cl, viiniä: ei yli 20cl, olutta: puolesta pullosta kahteen pulloon eli ei yli 80cl.)	255	14.1	15.8	15.8
	vähän (väkeviä juomia: pari ryyppyä eli 10- 20cl, viiniä: 20- 40cl, olutta: 3-4 pulloa eli 80- 160cl.)	544	30.2	33.8	49.6
	kohtalaisesti (väkeviä juomia: puoli pulloa eli 20-40cl, viiniä: 1 pullo eli 40-80cl, olutta: 5-9 pulloa eli 160-320cl.)	515	28.5	32.0	81.6
	paljon (väkeviä juomia: 1 pullo eli 40-80cl, viiniä: 1-2 pulloa eli 80- 16cl, olutta: 10- 15 pulloa eli 320- 500cl.)	136	7.5	8.4	90.0
	erittäin paljon (väkeviä juomia: ainakin 2 pulloa eli yli 80cl, viiniä: ainakin 3 pulloa eli yli 160cl, olutta: yli 15 pulloa eli yli 500cl.)	28	1.6	1.7	91.7
	ei osaa sanoa	133	7.4	8.3	100.0
	Total	1611	89.3	100.0	



Missing	System	193	10.7		
Total		1804	100.0		

**Kysymys 140a Alkoholijuomien nauttiminen aiheuttaa monelle jonkinlaista haittaa. Onko Teillä siitä syystä ollut terveydellisiä haittoja**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ei	1507	83.5	90.7	90.7
	ajoittain jonkin verran	138	7.6	8.3	99.0
	paljon	17	.9	1.0	100.0
	Total	1662	92.1	100.0	
Missing	System	142	7.9		
Total		1804	100.0		

**Kysymys 140b Alkoholijuomien nauttiminen aiheuttaa monelle jonkinlaista haittaa. Onko kaksoveljellänne siitä syystä ollut terveydellisiä haittoja**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ei	1510	83.7	92.9	92.9
	ajoittain jonkin verran	102	5.7	6.3	99.1
	paljon	14	.8	.9	100.0
	Total	1626	90.1	100.0	
Missing	System	178	9.9		
Total		1804	100.0		

**Kysymys 142-1a Alkoholijuomien nauttiminen aiheuttaa monelle jonkinlaista haittaa. Onko Teille siitä syystä ollut hankausta: ystävien kanssa**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	51	2.8	100.0	100.0
Missing	System	1753	97.2		
Total		1804	100.0		

**Kysymys 142-2a Alkoholijuomien nauttiminen aiheuttaa monelle jonkinlaista haittaa. Onko Teille siitä syystä ollut hankausta: sukulaisten kanssa**

		Frequency	Percent	Valid Percent	Cumulative Percent
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Valid	kyllä	45	2.5	100.0	100.0
Missing	System	1759	97.5		
Total		1804	100.0		

**Kysymys 142-3a Alkoholijuomien nauttiminen aiheuttaa monelle jonkinlaista haittaa. Onko Teille siitä syystä ollut hankausta: vanhempien kanssa**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	107	5.9	100.0	100.0
Missing	System	1697	94.1		
Total		1804	100.0		

**Kysymys 142-4a Alkoholijuomien nauttiminen aiheuttaa monelle jonkinlaista haittaa. Onko Teille siitä syystä ollut hankausta: vaimon kanssa**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	211	11.7	100.0	100.0
Missing	System	1593	88.3		
Total		1804	100.0		

**Kysymys 142-5a Alkoholijuomien nauttiminen aiheuttaa monelle jonkinlaista haittaa. Onko Teille siitä syystä ollut hankausta: työnantajien kanssa**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	20	1.1	100.0	100.0
Missing	System	1784	98.9		
Total		1804	100.0		

**Kysymys 142-6a Alkoholijuomien nauttiminen aiheuttaa monelle jonkinlaista haittaa. Onko Teille siitä syystä ollut hankausta: ei kenenkään kanssa**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	1325	73.4	100.0	100.0

Missing	System	479	26.6		
Total		1804	100.0		

**Kysymys 142-1b Alkoholijuomien nauttiminen aiheuttaa monelle jonkinlaista haittaa. Onko kaksosveljellänne siitä syystä ollut hankausta: ystävien kanssa**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	36	2.0	100.0	100.0
Missing	System	1768	98.0		
Total		1804	100.0		

**Kysymys 142-2b Alkoholijuomien nauttiminen aiheuttaa monelle jonkinlaista haittaa. Onko kaksosveljellänne siitä syystä ollut hankausta: sukulaisten kanssa**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	51	2.8	100.0	100.0
Missing	System	1753	97.2		
Total		1804	100.0		

**Kysymys 142-3b Alkoholijuomien nauttiminen aiheuttaa monelle jonkinlaista haittaa. Onko kaksosveljellänne siitä syystä ollut hankausta: vanhempien kanssa**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	112	6.2	100.0	100.0
Missing	System	1692	93.8		
Total		1804	100.0		

**Kysymys 142-4b Alkoholijuomien nauttiminen aiheuttaa monelle jonkinlaista haittaa. Onko kaksosveljellänne siitä syystä ollut hankausta: vaimon kanssa**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	174	9.6	100.0	100.0
Missing	System	1630	90.4		
Total		1804	100.0		

**Kysymys 142-5b Alkoholijuomien nauttiminen aiheuttaa monelle jonkinlaista haittaa. Onko kaksosveljellänne siitä syystä ollut hankausta: työnantajien kanssa**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	21	1.2	100.0	100.0
Missing	System	1783	98.8		
Total		1804	100.0		

**Kysymys 142-6b Alkoholijuomien nauttiminen aiheuttaa monelle jonkinlaista haittaa. Onko kaksosveljellänne siitä syystä ollut hankausta: ei kenenkään kanssa**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	1334	73.9	99.9	99.9
	5	1	.1	.1	99.9
	6	1	.1	.1	100.0
	Total	1336	74.1	100.0	
Missing	System	468	25.9		
Total		1804	100.0		

**Kysymys 143a Alkoholijuomien nauttiminen aiheuttaa monelle jonkinlaista haittaa. Onko Teillä siitä syystä ollut taloudellisia vaikeuksia**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ei lainkaan	1519	84.2	91.5	91.5
	vähän	76	4.2	4.6	96.0
	jonkin verran	52	2.9	3.1	99.2
	melko paljon	9	.5	.5	99.7
	erittäin paljon	5	.3	.3	100.0
	Total	1661	92.1	100.0	
Missing	System	143	7.9		
Total		1804	100.0		

**Kysymys 143b Alkoholijuomien nauttiminen aiheuttaa monelle jonkinlaista haittaa. Onko kaksosveljellänne siitä syystä ollut taloudellisia vaikeuksia**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ei lainkaan	1490	82.6	91.6	91.6
	vähän	71	3.9	4.4	95.9
	jonkin verran	39	2.2	2.4	98.3
	melko paljon	16	.9	1.0	99.3
	erittäin paljon	11	.6	.7	100.0
	Total	1627	90.2	100.0	
Missing	System	177	9.8		
Total		1804	100.0		

**Kysymys 144 Kun olette aloittanut alkoholijuomien nauttimisen, niin otatteko:**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	melkein aina liikaa	28	1.6	1.7	1.7
	usein liikaa	38	2.1	2.3	4.0
	silloin tällöin liikaa	374	20.7	22.7	26.7
	ei juuri koskaan liikaa	520	28.8	31.6	58.3
	ei koskaan liikaa	688	38.1	41.7	100.0
	Total	1648	91.4	100.0	
Missing	System	156	8.6		
Total		1804	100.0		

**Kysymys 145 Voitteko halutessanne lopettaa yhteen ryyppyyn**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	erittäin helposti	1068	59.2	65.0	65.0
	melko helposti	404	22.4	24.6	89.6
	ei oikein helposti	123	6.8	7.5	97.1
	yhteen ryyppyyn lopettaminen erittäin vaikeata	32	1.8	1.9	99.0
	yhteen ryyppyyn lopettaminen mahdotonta	16	.9	1.0	100.0
	Total	1643	91.1	100.0	
Missing	System	161	8.9		
Total		1804	100.0		

**Kysymys 149 Käyttääkö (käyttikö) isänne väkijuomia**

		Frequency	Percent	Valid Percent	Cumulative Percent
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Valid	kyllä	699	38.7	39.2	39.2
	ei yleensä	624	34.6	35.0	74.2
	ei lainkaan	409	22.7	22.9	97.1
	ei osaa sanoa	52	2.9	2.9	100.0
	Total	1784	98.9	100.0	
Missing	System	20	1.1		
Total		1804	100.0		

### Kysymys 150 Käyttääkö (käyttikö) äitinne alkoholijuomia

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	20	1.1	1.1	1.1
	ei yleensä	201	11.1	11.2	12.4
	ei lainkaan	1534	85.0	85.8	98.2
	ei osaa sanoa	33	1.8	1.8	100.0
	Total	1788	99.1	100.0	
Missing	System	16	.9		
Total		1804	100.0		

### Kysymys 151 Onko alkoholinkäyttö kodissanne vaikeuttanut Teidän lapsuuttanne

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ei yhtään	1452	80.5	82.0	82.0
	eipä sanottavasti	107	5.9	6.0	88.1
	jossain määrin	138	7.6	7.8	95.9
	paljon	58	3.2	3.3	99.2
	ei osaa sanoa	15	.8	.8	100.0
	Total	1770	98.1	100.0	
Missing	System	34	1.9		
Total		1804	100.0		

### Kysymys 156 Oletteko joskus alkoholijuomien käytön takia joutunut tilapäisiin rahavaikkeuksiin

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	230	12.7	13.2	13.2
	ei	1510	83.7	86.8	100.0
	Total	1740	96.5	100.0	
Missing	System	64	3.5		
Total		1804	100.0		

**Kysymys 157 Oletteko joskus alkoholijuomien käytön takia laiminlyönyt tehtävänne työssä**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	102	5.7	5.9	5.9
	ei	1639	90.9	94.1	100.0
	Total	1741	96.5	100.0	
Missing	System	63	3.5		
Total		1804	100.0		

**Kysymys 158 Oletteko joskus alkoholijuomien käytön takia joutunut työkavereittenne kanssa huonoihin väleihin**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	30	1.7	1.7	1.7
	ei	1711	94.8	98.3	100.0
	Total	1741	96.5	100.0	
Missing	System	63	3.5		
Total		1804	100.0		

**Kysymys 159 Oletteko joskus alkoholijuomien käytön takia menettänyt työpaikkanne**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	30	1.7	1.7	1.7
	ei	1711	94.8	98.3	100.0
	Total	1741	96.5	100.0	
Missing	System	63	3.5		
Total		1804	100.0		

**Kysymys 160 Oletteko joskus alkoholijuomien käytön takia joutunut putkaan**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	340	18.8	19.5	19.5
	ei	1400	77.6	80.5	100.0

	Total	1740	96.5	100.0	
Missing	System	64	3.5		
Total		1804	100.0		

**Kysymys 161 Oletteko joskus alkoholijuomien käytön takia joutunut tekemisiin huoltoviranomaisten kanssa**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	30	1.7	1.7	1.7
	ei	1709	94.7	98.3	100.0
	Total	1739	96.4	100.0	
Missing	System	65	3.6		
Total		1804	100.0		

**Kysymys 162 Oletteko joskus alkoholijuomien käytön takia ollut alkoholistivalvonnassa**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	12	.7	.7	.7
	ei	1727	95.7	99.3	100.0
	Total	1739	96.4	100.0	
Missing	System	65	3.6		
Total		1804	100.0		

**Kysymys 163 Oletteko joskus alkoholijuomien käytön takia ollut alkoholistihuoltolassa**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	7	.4	.4	.4
	ei	1731	96.0	99.6	100.0
	Total	1738	96.3	100.0	
Missing	System	66	3.7		
Total		1804	100.0		

**Kysymys 164 Oletteko joskus alkoholijuomien käytön takia menettänyt asuntonne**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	2	.1	.1	.1
	ei	1733	96.1	99.9	100.0
	Total	1735	96.2	100.0	
Missing	System	69	3.8		



Total	1804	100.0		
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### Kysymys 165 Oletteko joskus käynyt AA-kerhossa

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	5	.3	.3	.3
	ei	1734	96.1	99.7	100.0
	Total	1739	96.4	100.0	
Missing	System	65	3.6		
Total		1804	100.0		

## E. Sairaudet

### Kysymys 167 Oletteko yleensä ollut...

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	terve	1634	90.6	90.6	90.6
	sairaaloinen	160	8.9	8.9	99.5
	ei osaa sanoa	9	.5	.5	100.0
	Total	1803	99.9	100.0	
Missing	System	1	.1		
Total		1804	100.0		

### Kysymys 168-1 Onko Teillä nykyisin tai onko ollut astma

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	11	.6	.6	.6
	ei	1793	99.4	99.4	100.0
	Total	1804	100.0	100.0	

### Kysymys 168-2 Onko Teillä nykyisin tai onko ollut vatsahaava tai muita pitkäaikaisia vaivoja

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	229	12.7	12.7	12.7
	ei	1575	87.3	87.3	100.0
	Total	1804	100.0	100.0	

### Kysymys 168-3 Onko Teillä nykyisin tai onko ollut sappikiviä

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	18	1.0	1.0	1.0
	ei	1786	99.0	99.0	100.0
	Total	1804	100.0	100.0	

**Kysymys 168-4 Onko Teillä nykyisin tai onko ollut keltatautia**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	214	11.9	11.9	11.9
	ei	1590	88.1	88.1	100.0
	Total	1804	100.0	100.0	

**Kysymys 168-5 Onko Teillä nykyisin tai onko ollut verenvähyyttä (anemia)**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	14	.8	.8	.8
	ei	1790	99.2	99.2	100.0
	Total	1804	100.0	100.0	

**Kysymys 168-6 Onko Teillä nykyisin tai onko ollut sydäntautia**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	89	4.9	4.9	4.9
	ei	1715	95.1	95.1	100.0
	Total	1804	100.0	100.0	

**Kysymys 168-7 Onko Teillä nykyisin tai onko ollut kohonnut verenpaine**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	31	1.7	1.7	1.7
	ei	1773	98.3	98.3	100.0
	Total	1804	100.0	100.0	

**Kysymys 168-8 Onko Teillä nykyisin tai onko ollut tuberkuloosi**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	83	4.6	4.6	4.6
	ei	1721	95.4	95.4	100.0
	Total	1804	100.0	100.0	

**Kysymys 168-9 Onko Teillä nykyisin tai onko ollut  
silmäsairauksia**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	75	4.2	4.2	4.2
	ei	1729	95.8	95.8	100.0
	Total	1804	100.0	100.0	

**Kysymys 168-10 Onko Teillä nykyisin tai onko ollut Silmälasit  
/ Vahvuus**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	154	8.5	8.5	8.5
	ei	1650	91.5	91.5	100.0
	Total	1804	100.0	100.0	

**Kysymys 168-11 Onko Teillä nykyisin tai onko ollut  
kouristuksia**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	18	1.0	1.0	1.0
	ei	1786	99.0	99.0	100.0
	Total	1804	100.0	100.0	

**Kysymys 168-12 Onko Teillä nykyisin tai onko ollut  
unettomuutta**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	59	3.3	3.3	3.3
	ei	1745	96.7	96.7	100.0
	Total	1804	100.0	100.0	

**Kysymys 168-13 Onko Teillä nykyisin tai onko ollut kaatumatauti**

		Frequency	Percent	Valid Percent	Cumulative Percent
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Valid	kyllä	4	.2	.2	.2
	ei	1625	90.1	90.1	90.3
	puuttuva tieto	175	9.7	9.7	100.0
	Total	1804	100.0	100.0	

**Kysymys 168-14 Onko Teillä nykyisin tai onko ollut  
Hermostohäiriöitä**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	48	2.7	2.7	2.7
	ei	1756	97.3	97.3	100.0
	Total	1804	100.0	100.0	

**Kysymys 168-15 Onko Teillä nykyisin tai onko ollut  
Mielitauteja**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	9	.5	.5	.5
	ei	1795	99.5	99.5	100.0
	Total	1804	100.0	100.0	

**Kysymys 168-16 Onko Teillä nykyisin tai onko ollut sokeritauti**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	8	.4	.4	.4
	ei	1795	99.5	99.6	100.0
	Total	1803	99.9	100.0	
Missing	System	1	.1		
Total		1804	100.0		

**Kysymys 168-17 Onko Teillä nykyisin tai onko ollut struuma**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	32	1.8	1.8	1.8
	ei	1772	98.2	98.2	100.0
	Total	1804	100.0	100.0	

**Kysymys 168-18 Onko Teillä nykyisin tai onko ollut  
kilpirauhasmyrkytys (myrkkysteuma)**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	3	.2	.2	.2
	ei	1801	99.8	99.8	100.0
	Total	1804	100.0	100.0	

**Kysymys 168-19 Onko Teillä nykyisin tai onko ollut  
niveltauteja**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	108	6.0	6.0	6.0
	ei	1696	94.0	94.0	100.0
	Total	1804	100.0	100.0	

**Kysymys 168-20 Onko Teillä nykyisin tai onko ollut  
invaliiditeettiä**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	140	7.8	7.8	7.8
	ei	1664	92.2	92.2	100.0
	Total	1804	100.0	100.0	

**Kysymys 169 Oletteko koskaan muun sairauden takia ollut  
sairaalassa tai lääkärin hoidossa**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	1028	57.0	57.4	57.4
	ei	764	42.4	42.6	100.0
	Total	1792	99.3	100.0	
Missing	System	12	.7		
Total		1804	100.0		

**Kysymys 171a saako kaksostutkimuksen lääkäri tutustua  
sairaskertomukseenne**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	1378	76.4	97.4	97.4
	ei	37	2.1	2.6	100.0
	Total	1415	78.4	100.0	
Missing	System	389	21.6		

Total	1804	100.0		
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## F. Ravitsemus

### Kysymys 172 paino (kg)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	47.00	1	.1	.1	.1
	50.00	4	.2	.2	.3
	51.00	1	.1	.1	.3
	52.00	5	.3	.3	.6
	53.00	5	.3	.3	.9
	54.00	8	.4	.4	1.3
	55.00	4	.2	.2	1.6
	56.00	12	.7	.7	2.2
	56.60	1	.1	.1	2.3
	57.00	13	.7	.7	3.0
	57.50	1	.1	.1	3.1
	58.00	20	1.1	1.1	4.2
	59.00	12	.7	.7	4.8
	60.00	77	4.3	4.3	9.1
	61.00	15	.8	.8	9.9
	62.00	38	2.1	2.1	12.0
	63.00	49	2.7	2.7	14.8
	64.00	64	3.5	3.5	18.3
	65.00	121	6.7	6.7	25.0
	65.50	2	.1	.1	25.1
	66.00	40	2.2	2.2	27.3
	66.50	1	.1	.1	27.4
	67.00	62	3.4	3.4	30.8
	67.50	2	.1	.1	30.9
	68.00	98	5.4	5.4	36.4
	68.50	3	.2	.2	36.6
	69.00	51	2.8	2.8	39.4
	69.50	1	.1	.1	39.4
	70.00	217	12.0	12.0	51.5
	71.00	34	1.9	1.9	53.4
	71.50	2	.1	.1	53.5
	72.00	108	6.0	6.0	59.5
	72.50	3	.2	.2	59.6

	73.00	66	3.7	3.7	63.3
	73.50	3	.2	.2	63.4
	74.00	62	3.4	3.4	66.9
	74.50	1	.1	.1	66.9
	75.00	113	6.3	6.3	73.2
	75.50	1	.1	.1	73.3
	76.00	56	3.1	3.1	76.4
	76.50	1	.1	.1	76.4
	77.00	33	1.8	1.8	78.3
	77.50	2	.1	.1	78.4
	78.00	77	4.3	4.3	82.6
	79.00	12	.7	.7	83.3
	80.00	81	4.5	4.5	87.8
	81.00	13	.7	.7	88.5
	82.00	15	.8	.8	89.4
	82.50	1	.1	.1	89.4
	83.00	27	1.5	1.5	90.9
	84.00	24	1.3	1.3	92.2
	84.50	2	.1	.1	92.3
	85.00	30	1.7	1.7	94.0
	86.00	16	.9	.9	94.9
	87.00	13	.7	.7	95.6
	88.00	10	.6	.6	96.2
	89.00	6	.3	.3	96.5
	90.00	24	1.3	1.3	97.8
	91.00	1	.1	.1	97.9
	92.00	5	.3	.3	98.2
	93.00	4	.2	.2	98.4
	94.00	4	.2	.2	98.6
	95.00	8	.4	.4	99.1
	96.00	4	.2	.2	99.3
	97.00	3	.2	.2	99.4
	98.00	3	.2	.2	99.6
	100.00	3	.2	.2	99.8
	102.00	1	.1	.1	99.8
	104.00	1	.1	.1	99.9
	105.00	1	.1	.1	99.9
	118.00	1	.1	.1	100.0
	Total	1803	99.9	100.0	
Missing	System	1	.1		

Total	1804	100.0		
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### Kysymys 172 pituus (cm)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	145.00	1	.1	.1	.1
	150.00	2	.1	.1	.2
	152.00	3	.2	.2	.3
	153.00	2	.1	.1	.4
	154.00	2	.1	.1	.6
	155.00	5	.3	.3	.8
	156.00	6	.3	.3	1.2
	157.00	1	.1	.1	1.2
	158.00	7	.4	.4	1.6
	159.00	5	.3	.3	1.9
	160.00	16	.9	.9	2.8
	161.00	19	1.1	1.1	3.8
	161.50	1	.1	.1	3.9
	162.00	28	1.6	1.6	5.4
	163.00	42	2.3	2.3	7.8
	164.00	52	2.9	2.9	10.6
	165.00	81	4.5	4.5	15.1
	166.00	37	2.1	2.1	17.2
	167.00	68	3.8	3.8	21.0
	167.50	1	.1	.1	21.0
	168.00	104	5.8	5.8	26.8
	168.50	4	.2	.2	27.0
	169.00	95	5.3	5.3	32.3
	169.50	4	.2	.2	32.5
	170.00	159	8.8	8.8	41.3
	171.00	93	5.2	5.2	46.5
	171.50	1	.1	.1	46.5
	172.00	165	9.1	9.2	55.7
	172.50	5	.3	.3	56.0
	173.00	107	5.9	5.9	61.9
	173.50	4	.2	.2	62.1
	174.00	103	5.7	5.7	67.8
	175.00	96	5.3	5.3	73.2
	175.50	2	.1	.1	73.3
	176.00	103	5.7	5.7	79.0
	176.50	3	.2	.2	79.1



	177.00	61	3.4	3.4	82.5
	177.50	2	.1	.1	82.6
	178.00	83	4.6	4.6	87.2
	178.50	1	.1	.1	87.3
	179.00	40	2.2	2.2	89.5
	180.00	48	2.7	2.7	92.2
	181.00	23	1.3	1.3	93.5
	182.00	33	1.8	1.8	95.3
	182.50	1	.1	.1	95.3
	183.00	24	1.3	1.3	96.7
	183.50	1	.1	.1	96.7
	184.00	19	1.1	1.1	97.8
	185.00	13	.7	.7	98.5
	186.00	13	.7	.7	99.2
	187.00	6	.3	.3	99.6
	188.00	4	.2	.2	99.8
	189.00	1	.1	.1	99.8
	191.00	2	.1	.1	99.9
	194.00	1	.1	.1	100.0
	Total	1803	99.9	100.0	
Missing	System	1	.1		
Total		1804	100.0		

### Kysymys 174 onko Teillä joskus ollut ruokavalio

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	319	17.7	17.7	17.7
	ei	1483	82.2	82.3	100.0
	Total	1802	99.9	100.0	
Missing	System	2	.1		
Total		1804	100.0		

### Kysymys 178a Pidätkö rasvaisesta

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	1042	57.8	57.8	57.8
	ei	755	41.9	41.9	99.6
	ei osaa sanoa	7	.4	.4	100.0
	Total	1804	100.0	100.0	

**Kysymys 178b Pidättekö makeasta**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	1116	61.9	61.9	61.9
	ei	684	37.9	37.9	99.8
	ei osaa sanoa	4	.2	.2	100.0
	Total	1804	100.0	100.0	

**Kysymys 178c Pidättekö suolaisesta**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	1087	60.3	60.3	60.3
	ei	703	39.0	39.0	99.2
	ei osaa sanoa	14	.8	.8	100.0
	Total	1804	100.0	100.0	

**Kysymys 178d Pidättekö happamesta**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	873	48.4	48.4	48.4
	ei	921	51.1	51.1	99.4
	ei osaa sanoa	10	.6	.6	100.0
	Total	1804	100.0	100.0	

**Kysymys 179a Välttättekö rasvaista**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	721	40.0	40.0	40.0
	ei	1069	59.3	59.4	99.4
	ei osaa sanoa	11	.6	.6	100.0
	Total	1801	99.8	100.0	
Missing	System	3	.2		
Total		1804	100.0		

**Kysymys 179b Välttättekö makeaa**

		Frequency	Percent	Valid Percent	Cumulative Percent
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Valid	kyllä	494	27.4	27.4	27.4
	ei	1298	72.0	72.1	99.5
	ei osaa sanoa	9	.5	.5	100.0
	Total	1801	99.8	100.0	
Missing	System	3	.2		
Total		1804	100.0		

### Kysymys 179c Vältättekö suolaista

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	573	31.8	31.8	31.8
	ei	1217	67.5	67.6	99.4
	ei osaa sanoa	11	.6	.6	100.0
	Total	1801	99.8	100.0	
Missing	System	3	.2		
Total		1804	100.0		

### Kysymys 179d Vältättekö hapanta

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	820	45.5	45.6	45.6
	ei	969	53.7	53.8	99.4
	ei osaa sanoa	11	.6	.6	100.0
	Total	1800	99.8	100.0	
Missing	System	4	.2		
Total		1804	100.0		

### Kysymys 180a lisäättekö ruokaanne suolaa

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	497	27.5	27.6	27.6
	ei	1304	72.3	72.4	100.0
	Total	1801	99.8	100.0	
Missing	System	3	.2		
Total		1804	100.0		

### Kysymys 180b lisäättekö ruokaanne mausteita

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	501	27.8	27.8	27.8
	ei	1301	72.1	72.2	100.0

	Total	1802	99.9	100.0	
Missing	System	2	.1		
Total		1804	100.0		

**Kysymys 181 Montako kupillista kahvia juotte keskimäärin päivässä**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	187	10.4	10.4	10.4
	1	66	3.7	3.7	14.0
	2	145	8.0	8.1	22.1
	3	114	6.3	6.3	28.4
	4	231	12.8	12.8	41.3
	5	186	10.3	10.3	51.6
	6	368	20.4	20.4	72.0
	7	83	4.6	4.6	76.6
	8	102	5.7	5.7	82.3
	9	70	3.9	3.9	86.2
	10	181	10.0	10.0	96.2
	11	6	.3	.3	96.6
	12	18	1.0	1.0	97.6
	13	6	.3	.3	97.9
	14	4	.2	.2	98.1
	15	20	1.1	1.1	99.2
	16	3	.2	.2	99.4
	18	1	.1	.1	99.4
	20	7	.4	.4	99.8
	21	1	.1	.1	99.9
	24	1	.1	.1	99.9
	30	1	.1	.1	100.0
	Total	1801	99.8	100.0	
Missing	System	3	.2		
Total		1804	100.0		

**Kysymys 183 Paljonko tupakoitte päivässä (savukkeita)**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	636	35.3	35.3	35.3
	1	13	.7	.7	36.0
	2	13	.7	.7	36.7
	3	14	.8	.8	37.5
	4	21	1.2	1.2	38.7
	5	32	1.8	1.8	40.5
	6	28	1.6	1.6	42.0
	7	18	1.0	1.0	43.0
	8	41	2.3	2.3	45.3
	9	1	.1	.1	45.3
	10	254	14.1	14.1	59.4
	11	3	.2	.2	59.6
	12	82	4.5	4.6	64.2
	13	36	2.0	2.0	66.1
	14	15	.8	.8	67.0
	15	85	4.7	4.7	71.7
	16	5	.3	.3	72.0
	17	3	.2	.2	72.1
	18	14	.8	.8	72.9
	20	332	18.4	18.4	91.3
	22	1	.1	.1	91.4
	23	2	.1	.1	91.5
	24	2	.1	.1	91.6
	25	121	6.7	6.7	98.3
	26	1	.1	.1	98.4
	27	1	.1	.1	98.4
	28	3	.2	.2	98.6
	30	14	.8	.8	99.4
	33	1	.1	.1	99.4
	35	1	.1	.1	99.5
	39	1	.1	.1	99.6
	40	6	.3	.3	99.9
	42	1	.1	.1	99.9
	49	1	.1	.1	100.0
	Total	1802	99.9	100.0	

Missing	System	2	.1		
Total		1804	100.0		

## G. Polysymptomaattiset tuntomerkit

### Silmien väri

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	sininen	1016	56.3	56.4	56.4
	harmaa	586	32.5	32.6	89.0
	ruskea	197	10.9	10.9	99.9
	vihertävä	1	.1	.1	100.0
	Total	1800	99.8	100.0	
Missing	System	4	.2		
Total		1804	100.0		

### Eroaako kaksoveljenne Teistä silmien väriltään

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	sama	508	28.2	29.2	29.2
	ei eroa	916	50.8	52.6	81.8
	eroaa	316	17.5	18.2	100.0
	Total	1740	96.5	100.0	
Missing	System	64	3.5		
Total		1804	100.0		

### Tukan väri

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	vaalea	17	.9	.9	.9
	ruskea	1498	83.0	83.6	84.5
	musta	218	12.1	12.2	96.7
	punainen	34	1.9	1.9	98.6
	harmaa	25	1.4	1.4	100.0
	Total	1792	99.3	100.0	
Missing	System	12	.7		
Total		1804	100.0		

### Eroaako kaksosveljenne Teistä tukan väriltään

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	sama	331	18.3	20.7	20.7
	ei eroa	542	30.0	33.9	54.7
	eroaa	724	40.1	45.3	100.0
	Total	1597	88.5	100.0	
Missing	System	207	11.5		
Total		1804	100.0		

### Tukan-muoto

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kihara	234	13.0	13.0	13.0
	suora	1568	86.9	87.0	100.0
	Total	1802	99.9	100.0	
Missing	System	2	.1		
Total		1804	100.0		

### Eroaako kaksosveljenne Teistä tukan-muodoltaan

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	sama	434	24.1	29.3	29.3
	ei eroa	831	46.1	56.2	85.5
	eroaa	214	11.9	14.5	100.0
	Total	1479	82.0	100.0	
Missing	System	325	18.0		
Total		1804	100.0		

### Kalju

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	alkava	536	29.7	29.9	29.9
	huomattava	239	13.2	13.3	43.2
	kokonaan	35	1.9	1.9	45.1
	ei lainkaan	985	54.6	54.9	100.0
	Total	1795	99.5	100.0	
Missing	System	9	.5		
Total		1804	100.0		

### Kalju päälaelta

		Frequency	Percent	Valid Percent	Cumulative Percent
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Valid	kyllä	258	14.3	100.0	100.0
Missing	System	1546	85.7		
Total		1804	100.0		

### Kalju ohimolta

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	597	33.1	100.0	100.0
Missing	System	1207	66.9		
Total		1804	100.0		

### Kalju edestä

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	219	12.1	100.0	100.0
Missing	System	1585	87.9		
Total		1804	100.0		

### Luusto

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	hento	112	6.2	6.2	6.2
	tavallinen	1229	68.1	68.4	74.6
	vankka	456	25.3	25.4	100.0
	Total	1797	99.6	100.0	
Missing	System	7	.4		
Total		1804	100.0		

### Eroaako kaksoveljenne Teistä luustoltaan

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	sama	279	15.5	22.1	22.1
	ei eroa	664	36.8	52.7	74.8
	eroaa	318	17.6	25.2	100.0
	Total	1261	69.9	100.0	
Missing	System	543	30.1		
Total		1804	100.0		



		Haastattelija nro.			Cumulative Percent
		Frequency	Percent	Valid Percent	
Valid	1	87	4.8	4.8	4.8
	2	84	4.7	4.7	9.5
	3	68	3.8	3.8	13.3
	4	40	2.2	2.2	15.5
	5	66	3.7	3.7	19.1
	6	61	3.4	3.4	22.5
	7	56	3.1	3.1	25.6
	8	71	3.9	3.9	29.6
	9	102	5.7	5.7	35.2
	10	77	4.3	4.3	39.5
	11	50	2.8	2.8	42.3
	12	47	2.6	2.6	44.9
	13	70	3.9	3.9	48.8
	14	61	3.4	3.4	52.1
	15	48	2.7	2.7	54.8
	16	60	3.3	3.3	58.1
	17	93	5.2	5.2	63.3
	18	60	3.3	3.3	66.6
	19	72	4.0	4.0	70.6
	20	36	2.0	2.0	72.6
	22	98	5.4	5.4	78.0
	23	37	2.1	2.1	80.1
	24	54	3.0	3.0	83.1
	25	39	2.2	2.2	85.2
	26	68	3.8	3.8	89.0
	27	1	.1	.1	89.1
	28	60	3.3	3.3	92.4
	29	15	.8	.8	93.2
	30	42	2.3	2.3	95.6
	31	80	4.4	4.4	100.0
	Total	1803	99.9	100.0	
Missing	System	1	.1		
Total		1804	100.0		

		Haastattelu kesti			Cumulative Percent
		Frequency	Percent	Valid Percent	

Valid	.35	1	.1	.1	.1
	.50	5	.3	.3	.3
	.55	9	.5	.5	.8
	1.00	81	4.5	4.5	5.4
	1.05	53	2.9	3.0	8.3
	1.10	125	6.9	7.0	15.3
	1.15	130	7.2	7.2	22.5
	1.20	147	8.1	8.2	30.7
	1.25	101	5.6	5.6	36.3
	1.30	211	11.7	11.8	48.1
	1.34	2	.1	.1	48.2
	1.35	120	6.7	6.7	54.9
	1.38	1	.1	.1	55.0
	1.40	127	7.0	7.1	62.0
	1.45	116	6.4	6.5	68.5
	1.50	112	6.2	6.2	74.7
	1.55	40	2.2	2.2	77.0
	2.00	125	6.9	7.0	83.9
	2.05	47	2.6	2.6	86.6
	2.10	47	2.6	2.6	89.2
	2.15	38	2.1	2.1	91.3
	2.20	33	1.8	1.8	93.1
	2.25	18	1.0	1.0	94.1
	2.30	44	2.4	2.5	96.6
	2.35	11	.6	.6	97.2
	2.40	6	.3	.3	97.5
	2.45	10	.6	.6	98.1
	2.50	11	.6	.6	98.7
	2.55	4	.2	.2	98.9
	3.00	14	.8	.8	99.7
	3.10	2	.1	.1	99.8
	3.30	1	.1	.1	99.9
	4.00	1	.1	.1	99.9
	4.35	1	.1	.1	100.0
	Total	1794	99.4	100.0	
Missing	System	10	.6		
Total		1804	100.0		

### Tietojen luotettavuus 4-10

	Frequency	Percent	Valid Percent	Cumulative Percent
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Valid	6	24	1.3	1.3	1.3
	7	111	6.2	6.2	7.6
	8	499	27.7	27.9	35.5
	9	874	48.4	48.9	84.4
	10	279	15.5	15.6	100.0
	Total	1787	99.1	100.0	
Missing	System	17	.9		
Total		1804	100.0		

### Oliko haastattelu kahdenkeskinen

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kyllä	1072	59.4	60.0	60.0
	osittain	491	27.2	27.5	87.5
	ei	223	12.4	12.5	100.0
	Total	1786	99.0	100.0	
Missing	System	18	1.0		
Total		1804	100.0		

## 10 Appendix 2

**Questions this study used from the FTC and FT16 surveys:**

### **The Older Finnish Twin Cohort (FTC) – Wave 2 (in Finnish)**

*Taustakysymykset:*

1. Kysymys 7: Milloin ja missä synnyitte?
2. Kysymys 78: Mitä kouluja ja kursseja olette käynyt? Rengastakaa vain yksi vaihtoehto.
  - a. vähemmän kuin kansakoulu
  - b. kansakoulu tai vastaava
  - c. kansakoulu tai vastaava sekä vähintään yhden vuoden ammattikoulutus
  - d. keskikoulu tai kansankorkeakoulu

- e. keskikoulu tai kansankorkeakoulu sekä vähintään yhden vuoden ammattikoulutus (myös lukio-opinnot)
- f. ylioppilastutkinto
- g. ylioppilastutkinto sekä vähintään yhden vuoden ammattikoulutus (myös korkeakouluopinnot)
- h. korkeakoulu- tai yliopistotutkinto
- i. muu koulutus, mikä?

3. Kysymys 79: Oletteko nykyään

- a. Työssä
- b. kotirouva, emäntä
- c. vanhuuseläkkeellä
- d. työkyvyttömyyseläkkeellä tai sairauseläkkeellä
- e. opiskelija, koululainen
- f. työtön, työpaikkaa etsivä
- g. muu, mikä?

4. Kysymys 8: Mikä on siviilisäätynne?

- a. naimaton
- b. naimisissa
- c. uusissa naimisissa
- d. avoliitossa
- e. eronnut tai asumuserossa
- f. leski

5. Kysymys 97h: Seuraavassa luetellaan joukko tapahtumia, joita elämässä voi sattua. Onko Teille sattunut seuraavia tapahtumia? Perheenjäsenten lukumäärän lisääntyminen esim. lapsen syntyminen, adoptioiminen, sukulaisen muutto perheeseen.
- a. Ei ollenkaan
  - b. Viimeisen puolen vuoden aikana
  - c. Viimeisen viiden vuoden aikana

d. Aikaisemmin

6. Kysymys 9: Kuinka pitkä olette? (senttimetrin tarkkuudella)

7. Kysymys 10: Kuinka paljon painatte? (kilon tarkkuudella)

*Terveyskäyttäytyminen:*

8. Kysymys 44: Poltatteko edelleen savukkeita säännöllisesti?

a. ei → Minkä ikäinen olitte, kun lopetitte? Montako savuketta poltatte keskimäärin päivittäin ennenkuin lopetitte?

- i. ei yhtään
- ii. alle 5 savuketta
- iii. 5- 9 savuketta
- iv. 10-14 savuketta
- v. 15-19 savuketta
- vi. 20-24 savuketta
- vii. 25-39 savuketta
- viii. yli 40 savuketta

b. kyllä → Montako savuketta poltatte keskimäärin päivittäin?

- i. ei yhtään
- ii. alle 5 savuketta
- iii. 5- 9 savuketta
- iv. 10-14 savuketta
- v. 15-19 savuketta
- vi. 20-24 savuketta
- vii. 25-39 savuketta
- viii. yli 40 savuketta

9. Kysymys 61: Kuinka paljon juotte kahvia tai teetä päivittäin? Yhtä kupillista kohden käytän sokeria

- a. en yhtään palaa
- b. yhden palan
- c. kaksi palaa
- d. kolme palaa
- e. neljä palaa tai enemmän

*Sairaudet:*

10. Kysymys 30: Onko lääkäri koskaan sanonut, että Teillä on tai on ollut (Rengastakaa myös, jos vastaatte ei.)
- a. keuhkoastma
  - b. epilepsia (tai kaatumatauti)
  - c. korkea verenpaine
  - d. sokeritauti

**FinnTwin16-Cohort (FT16) – Wave 5 (in Finnish)**

*Taustakysymykset:*

1. Kysymys 4: Mitä kouluja / tutkintoja olet suorittanut? (voit valita useita vaihtoehtoja)
- a. Yläaste
  - b. Ammattikoulu tai vastaava koulu
  - c. Aikuisopisto tai vastaava taso
  - d. Lukio
  - e. Ammattikorkeakoulu
  - f. Korkeakoulu tai yliopisto
2. Kysymys 6: Oletko tällä hetkellä (pääasiassa)
- a. Työntekijä
  - b. Koti-isä/äiti
  - c. Opiskelija
  - d. Työtön
  - e. Eläkkeellä
  - f. Muu, tarkenna

3. Kysymys 40: Kuinka kauan suhteesi nykyiseen puolisoosi on kestänyt?
  - a. Ei ole parisuhteessa
  - b. Olen parisuhteessa, naimisissa tai asun jonkun kanssa, parisuhde alkoi noin. \_\_\_\_\_ vuotta sitten
4. Kysymys 43: Onko sinulla lapsia, joiden biologinen isä / äiti olet?
  - a. Ei → Oletko sinä tai kumppanisi koskaan yrittänyt tulla raskaaksi yli vuoden ajan onnistumatta?
    - i. Ei → siirry kysymykseen 45
    - ii. Kyllä → Kuinka vanha olit, kun sinä tai kumppanisi yrititte tulla raskaaksi ensimmäisen kerran?
  - b. Kyllä → Kuinka monta lasta?
5. Kysymys 23: Kuinka pitkä olet?
6. Kysymys 24: Mikä on tämänhetkinen painosi?

### *Terveyskäyttäytyminen:*

7. Kysymys 65: Mikä seuraavista vaihtoehdoista kuvaa parhaiten nykyistä savukkeiden käyttösi?
  - a. Tupakoin päivittäin
  - b. Tupakoin kerran viikossa tai useammin, en kuitenkaan päivittäin → siirry kysymykseen 67
  - c. Tupakoin harvemmin kuin kerran viikossa → siirry kysymykseen 67
  - d. Olen lopettanut tupakoinnin
  - e. En ole koskaan tupakoinut → siirry kysymykseen 67
8. Kysymys 66D: Kuinka monta savuketta päivässä tupakoit?
  - a. 10 tai vähemmän
  - b. 11-20
  - c. 21-30
  - d. 31 tai enemmän

9. Kysymys 50: Kuinka usein juot alkoholia? Yritä ottaa huomioon myös ajat, jolloin olet juonut hyvin pieniä määriä alkoholia, esim. puoli pulloa keskivahvaa olutta tai tilkka viiniä.

- a. Päivittäin
- b. Pari kertaa viikossa
- c. Kerran viikossa
- d. Pari kertaa kuukaudessa
- e. Noin kerran kuukaudessa
- f. Noin kerran kahdessa kuukaudessa
- g. 3-4 kertaa vuodessa
- h. Kerran vuodessa tai harvemmin
- i. En juo alkoholia

10. Kysymys 54: Kuinka monta alkoholijuomaa juot yleensä päivinä jolloin kulutat alkoholia?

Yksi alkoholijuoma vastaa:

- Yhtä pulloa keskivahvaa olutta tai siideriä (33 cl)
- Yhtä lasia viiniä (12 cl)
- Pientä lasillista vahvaa viiniä (8 cl)
- Yhtä annosta viinaa (4cl)



En ole koskaan juonut alkoholia

11. Kysymys 62g: Ota kantaa seuraaviin väitteisiin, vältän rasvaista ruokaa

- a. Yleensä
- b. Usein
- c. Joskus
- d. Harvoin

### *Sairaudet:*

12. Kysymys 15: Onko lääkäri kertonut sinulle, että sinulla on tai on joskus ollut jokin seuraavista sairauksista tai vammoista:

- a. Korkea verenpaine
- b. Tyypin 1 diabetes



- c. Tyypin 2 diabetes
- d. Astma
- e. Epilepsia